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# SUGAR REPORTS

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## THE SUPREME COURT DECIDES SUGAR CASES

The Supreme Court of the United States announced an opinion in three cases involving the limitation on the amount of direct-consumption sugar that may be brought into the continental United States from Puerto Rico and the methods that may be used in allotting quotas under the Sugar Act. In a 7 to 1 decision the Court held that the Secretary of Agriculture had properly exercised his administrative discretion in allotting the direct-consumption portion of the quota for Puerto Rico in 1948. The specific issues raised had been whether some mathematical weight must be given to all three of the standards, "processings of sugar from sugarcane to which proportionate shares pertained", "past marketings", and "ability to market"; whether consideration of past marketings must be limited to those occurring in a limited number of recent years and whether performance, if used as a measure of ability, must be current performance. The effect of the Court decision is to support the Secretary in the exercise of complete discretion with respect to those questions, the Court stating, "A variety of plans of allotment may well conform to the statutory standards. But the choice among permissive plans is necessarily the Secretary's; he is the agency entrusted by Congress to make the choice."

On the constitutional issue, the Court held unanimously that Congress had acted within its proper prerogatives in limiting the quantity of sugar which could be brought into the continental United States from Puerto Rico for consumption without further processing.

The Court held in the third case that, "...it would entail an empty decision to decide whether Puerto Rico has a standing as a party in this case..." Since the issues were decided in the other two cases, the Court held that it was unnecessary to decide the question of Puerto Rico's standing to sue.

The three cases were identified as Nos. 27, 30, and 32 - October Term 1949, Supreme Court of the United States.

U. S. SUGAR SUPPLY AREAS: MARKETING QUOTAS AND PRODUCTION, 1900 - 1950

The trend of sugar production from 1900 to 1934 in most of the major areas supplying the United States was upward. After the introduction of the first sugar marketing quotas under the Jones-Costigan Act in 1934 trends in production have differed in the sugar-producing areas on which we rely for continental U. S. supplies. Upward trends were continued in Puerto Rico and the mainland cane area. Production in the domestic beet area has been maintained at a higher level than that existing prior to 1934 but there have been wide fluctuations in volume. Hawaiian sugar production has had a slight downward trend since 1933 but improvement was noted in 1947 and 1949. Cuban production has about doubled the 1934-41 rate. Philippine production was practically stopped as a result of war damage but some recovery was made in 1948 and 1949. Production levels there in 1949, however, were still about 30 percent below the 1934-41 average.

Factors Influencing Sugar Production

While sugar quotas have coincided with increased prosperity and expansion in the sugar industry, it is not possible to isolate the effects of the successive Sugar Acts from other economic influences. Since 1934 our economy as a whole recovered from a great depression and achieved a new high in prosperity. Technological developments and increased consumption, due in part to a rapidly rising population, have contributed to greater sugar production. Another important factor has been the presence or absence of alternative opportunities for the use of land and labor. Where such competition exists, as in the domestic beet area, the level of sugar production is influenced by the income from sugar beets compared with the returns from other crops. In such cases, insofar as the Sugar Acts have increased grower incomes, they have strengthened the competitive position of sugar beets as a farm crop. But at the same time, other agricultural programs promoting increased returns for other crops have partly offset the advantages gained by sugar. The sugarcane areas, on the other hand, are in a different situation as few, if any, acceptable alternatives for land and labor exist. In these areas higher returns for sugar will stimulate production somewhat, but their chief result is to improve the income of the sugar industry.

During the World War II period, the quota provisions of the Sugar Act were suspended. Abnormal conditions affected production variously in the different sugar areas. Shortages of labor and fertilizer for a time reversed the upward trend in the domestic beet area and Puerto Rico. In Hawaii, these factors and, in addition, the loss of much crop land to the Armed Forces accelerated the slight downward trend begun in the mid-nineteen-thirties. Production in the Philippines ceased almost entirely during the Japanese occupation, while production in Cuba (after the shipping difficulties of the early war years were alleviated) increased gradually to reach an all-time high in 1947 and 1948 in response to heavy world demand.

Developments before 1934

Figures I through VI show the history of sugar production since 1900 in the six major areas supplying the United States, together with marketing quotas for the years in which these were operative. Marked production increases over the fifty-year period characterize all areas except mainland



cane. In the decade 1900-10, the beet sugar industry became firmly established. The extension of free trade to Puerto Rico in 1901 and the grant of tariff preference to Cuba in 1903, stimulated expansion of sugar production in those areas. During the succeeding decade 1910-20, sugar production increased most notably in the Philippines (which were granted free entry for sugar in 1913), and in the beet area and Cuba, where production expanded rapidly in response to the high sugar prices during and immediately following World War I. The decade 1920-30 saw further increases, particularly between 1925 and 1929, in U. S. insular areas and Cuba. The factors chiefly responsible for larger sugar output during the 1920's were more intensive cultivation, more efficient processing, and introduction of new cane varieties. The Philippines illustrate this most strikingly. There, acreage rose by less than 10 percent but yields increased by 50 percent. The output of low-grade sugars was greatly curtailed, while that of centrifugal sugar increased fourfold, as a result of the replacement of primitive cane-crushing equipment by modern mills. In Puerto Rico also, increase in harvested acreage was relatively slight before 1931, but yields were raised by intensive application of fertilizer and the introduction of disease-resistant varieties of cane. Sugar recovery also showed improvement. In Hawaii, where these technical advances began before World War I, the increase in output during the 1920's was less striking. However, here again higher yields achieved through more intensive cultivation resulted in greater sugar production.

Cuba, like Hawaii, made considerable modernization and technical advances before 1920. Until World War I almost all of Cuba's sugar had been marketed in the United States. The destruction of Europe's beet industry and the inaccessibility of Pacific sugars during World War I led Cuba to export sugar to Europe. This expanded market greatly stimulated Cuban production until 1925, when a world sugar depression set in. This depression did not affect the U. S. market until 1929 and Cuba maintained her exports to the U. S. at relatively high levels until 1930.

The year 1929 marked the end of expansion in the United States sugar market. Thereafter came a contracting demand. Prices in the United States continued to fall sharply despite the two-cent tariff imposed on Cuban sugar in 1930 to protect American producers. This tariff merely stimulated further increases in production in all U. S. areas (except mainland cane).

#### Adjustments 1934-36

On April 11, 1933, the Chairman of the U. S. Tariff Commission in a letter to the President stated: "It is evident that no increase of the American tariff can relieve the \* \* \* (sugar-price) situation in this country or in Cuba," and recommended that the Administration "limit the supplies of sugar offered for sale in the United States." Following this finding and recommendation, the Congress passed the Jones-Costigan Act. The operation of this Act as well as improvement in general economic conditions resulted in average raw sugar prices (c and f basis, New York) of 1.499 cent in 1934 and 2.331 cents in 1935, compared with an average of 1.231 cent for 1930-33.

The consumption estimates established by the Secretary of Agriculture for 1934 and 1935 (and originally for 1936) were about the same as the

annual quantity of sugar delivered for consumption in 1930-33. The size of the consumption estimate had peculiar significance for Puerto Rico and the Philippines. The quotas for the insular areas (including Cuba) had been established on the basis of their deliveries during representative years (1931, 1932, and 1933 for all but Hawaii, for which the years were 1930, 1931, and 1932). The 1933-34 crops in Puerto Rico and the Philippines, however, reached new highs. 1/ Since they could not be marketed under the 1934 quotas, stocks at the beginning of 1935 were 250,000 tons in Puerto Rico and 451,000 tons in the Philippines. In order to absorb these depressing surpluses, production in those two areas was restricted below marketing quotas for the crops of 1934-35 and 1935-36. 2/ In other areas, while production was restricted, cutbacks below the quotas were not considered necessary.

#### The Sugar Acts of 1937 and 1948

By the latter part of 1936 sugar prices in the United States had recovered to nearly \$3.00 per 100 pounds, c. and f., New York, and the market was again expanding. This expansion gave the various supply areas new opportunities for increasing production, this time within a quota system which provided a stabilized market. By 1940 distribution by primary distributors was close to seven million tons.

The shortage of sugar during the war years reduced U. S. civilian distribution below the 1940 level. While per capita distribution in 1949 was still slightly below the immediate pre-war years, population increases and favorable economic conditions provided a market for over seven and one-half million tons.

Naturally, developments have not been identical in all areas supplying the United States since the passage of the Sugar Act of 1937 as the different areas are subject to widely different geographic and economic conditions. A brief account of developments in these areas follows.

Figures I through VI trace the course of production over the past 50 years in the major areas supplying the U. S.. Final marketing quotas for the years in which quotas were applicable for the full twelve months are also shown. Production has been attributed to the calendar year in which the major part of the crop is harvested. The figures for the years 1900-08 are not altogether comparable with those for later years. (The notes to the tables explain the different sources used.)

While in Figures I to VI marketing quotas are superimposed on lines indicating production, there is not necessarily a causal relationship between them, at least on a year-to-year basis. Over a long period, production and marketings tend to be equalized, and the general level of production is influenced somewhat by the levels of the quotas. Prior to the Sugar Act of 1948, however, the differences between marketing quotas and production in

- 1/ The high production in Puerto Rico resulted from record yields; in the Philippines from a combination of high yields and record acreage harvested.
- 2/ With the invalidation of the AAA Act on Jan. 6, 1936, production limitations under the Jones-Costigan Act were removed, although marketing quotas were retained under Public Resolution 109, 74th Congress, approved June 19, 1936.



any one year may be comparatively wide as the size of the crops was pretty well determined before the calendar year quotas were announced. This was especially true of domestic beets, which are harvested in the fall of the year preceding the establishment of quotas. In Puerto Rico and Hawaii, where the original marketing quotas are announced before the harvest is far advanced, it is possible, by restricting harvesting, to reduce production in response to a low quota. Since 1948, with statutory quotas for domestic areas specified in the Act, there is a definite indication of the size of quota.

Another reason for lack of similarity between production figures and marketing quotas in Figures I through VI in any given year is that the bars denoting quotas, except for 1941, represent final marketing quotas. In most years, quotas changed several times between January and December, reflecting changes in the consumption estimates as well as the proration of deficits from areas which could not meet their marketing quotas. Often the final quotas were set too late in the year to exert any influence on the crop being produced. This is particularly true of 1941, when approaching war caused the Secretary to revise the consumption estimate upward from 6.6 million to 9.0 million tons in a series of twelve quota revisions, the last of which occurred on October 21. Because the final consumption estimate (9.0 million tons) provided virtually unrestricted marketings, the final quotas for that year had little practical significance. For 1941, therefore, the charts present original as well as final quotas.

Tables 2 through 6 show the production data and marketing quotas for the various areas supplying sugar to the continental United States. Table 1 lists the various consumption estimates which have been effective since 1934.

#### U. S. Domestic Beet Area

It is difficult to trace any clear trend in beet sugar production over the past fifteen years. Harvested acreage has fluctuated widely as a result of drought (in the mid-thirties), shortage of labor, and government programs and competition from other crops. Yields per acre, however, have steadily increased. A higher proportion of the total acreage is now concentrated in the high-yield areas of the Western States and improvements have been made in seed and production practices and in disease and pest control.

Because of the sensitivity of the sugar beet industry to weather and returns on competing crops, deficits in meeting beet quotas occurred in 1936 and 1937 and again in 1948 and 1949. On the other hand, beet acreage in 1939 was limited and in 1941 a restriction of 16 percent below the 1940 acreage was made effective.

#### Mainland Cane

During the 1920's mosaic and red rot nearly destroyed the Louisiana sugarcane industry. In the 1930's production of mainland cane sugar increased rapidly, partly as a result of the opening of the new sugar areas in Florida, and partly because of increases in harvested acreage and yields in Louisiana. The improvement in Louisiana cane came about largely through the introduction of new, disease-resistant varieties. After 1938 production leveled off and the total for the two areas since then has averaged slightly below the present statutory quota of 500,000 tons. (See Figure IV.) As the Figure show, output

in Louisiana fluctuates considerably more than in Florida, as Louisiana with its short growing season is much more susceptible to weather. 1/ The freeze in 1940 not only cut production in that year by half but also damaged the stubble cane and new plantings harvested in 1941. Another freeze reduced yields in 1947.

The output increased rapidly between 1933 and 1938 and acreage restrictions were applied to four crops, 1938-41. Because of high yields in 1938 and 1939, production exceeded the contemplated levels, while the freeze in 1940 reduced production for 1940 and 1941 below the anticipated tonnage. Under the Sugar Act of 1948, the statutory quota was set at 500,000 tons. While a deficit was declared in 1948, 1949 production was sufficient to allow marketings equal to the statutory quota plus a portion of the Hawaiian deficit prorated to the mainland cane area.

The substitution of mechanical harvesting equipment for hand labor in the mainland cane sugar area has greatly increased the percentage of stale, immature, or trashy cane delivered to the mills. 2/ In 1949 progress was made toward correcting this defect. In Florida, sugar would compete more extensively with vegetables if it were not for the present limitations of mill capacity. Established sugarcane growers are likewise limited by the capacity of the mills. Although sugarcane culture has advantages on certain of the Florida muck lands, it is becoming apparent that certain parts of these lands, because of soil depth and freeze hazards, are not suitable for sugarcane.

### Hawaii

Hawaiian sugar production between 1930 and 1940 was relatively stable although a slight downward movement is discernible after 1933 (See Figure IV). During the war years, the decline was greatly accelerated, and reached a low point in 1946 as a result of the strike of the sugar workers. Since 1946 an upward trend again has been established, and the 1949 harvest was larger than expected despite the maritime strike which lasted from May 1 until October 24, 1949. In 1934, under the Jones-Costigan Act, a three-year program was introduced with the purpose of stabilizing production at about 975,000 tons annually a reduction of 7 percent from the average for 1931-1933. Accordingly, 24,000 acres of plantation sugarcane land were taken out of production. In 1936, 1937, and 1938, Hawaii's share of the U. S. mainland market, plus local consumption, would have supported a production somewhat above 975,000 tons. Since each crop matures from 18 to 24 months, it is difficult to increase Hawaii's production in a short time. Partly for this reason Hawaii did not respond to the higher quotas of the late 1930's. Also the decline in sugar prices which began in 1937, the same year that mechanical harvesting was introduced in the Islands, led growers to discontinue cane production on land unsuited to mechanized harvesting. During the period 1940-48 acreage in cane decreased by a further 12 percent. This was partly due to the fact that the Armed Forces took over many acres of crop land along the coastal areas and partly due to labor shortage during the war.

1/ See Stanley, Felix E., Marketing Sugarcane in Louisiana, USDA, PMA, Sugar Branch, Washington, D. C., Nov. 1949, p. 20.

2/ See Stanley, op cit., pp. 33-40



The year 1949, however, saw some increases in acreage, and a considerable increase in production, despite the maritime strike. Some of the land taken over by the Armed Forces has been returned to private control. A number of plantations are bringing back land previously abandoned as unfit for mechanized production. 1/

### Puerto Rico

In 1949 Puerto Rico's sugar production reached the record high of 1,288,000 short tons, or about 275,000 tons more than was required to meet her statutory mainland quota and local consumption. Had Puerto Rico not received reallocation of 181,000 tons as a result of the deficits in the domestic beet area and Hawaii, a large surplus would have been carried over into 1950.

Including this 1949 record crop, Puerto Rico's production over the past ten years (1940-49) has averaged just over one million tons, which is about equal to the statutory quota established by the Sugar Act of 1948, plus local consumption. This average, of course, includes 1940-41, when production restrictions were imposed, the drought year of 1943-44, and the war years when yields suffered from lack of fertilizer. 2/ Still, the 1940-49 production represents an increase of 100,000 tons over the average of the preceding 10 years (1930-39), which also included some "abnormal" years. Severe production restrictions were effective in 1934-35 and in 1935-36; also in 1938-39.

Puerto Rico's production has consistently been close to or in excess of its marketing quotas since the Jones-Costigan Act became effective. The 1948-49 crop of close to 1.3 million tons resulted from the largest acreage ever harvested (about 350,000 acres) plus exceptionally good weather conditions, which produced yields of 32 tons of cane per acre. 3/

One factor greatly affecting Puerto Rico's sugar production is the weather. Puerto Rican production is concentrated in a relatively small area, droughts (especially on the south coast) and hurricanes in some years, and exceptionally fine growing weather in other years, result in wide variations in output. The saw-tooth design of production in Figure V largely reflects variability caused by weather.

### The Philippines

From 1913 until the Jones-Costigan Act became effective the Philippines had been permitted to market unlimited quantities of sugar, duty-free, in the United States. The high rates of duty on Cuban sugar during the 1920's offset the disadvantages of high freight costs from the Philippines. In 1934 sugar from both areas was made subject to marketing quotas, and the Philippine Independence Act limited the amount of Philippine sugar which might enter the

1/ See "Recent Developments in Hawaiian Land Utilization" by E.O. Kraemer, Occasional Paper No. 51, University of Hawaii, Honolulu, September 1949.

2/ The crop of 1941-42 was also under restriction until Pearl Harbor, when restrictions were lifted. This was just before the start of the harvesting season.

3/ Acreage and yield figures for the 1948-49 crop are preliminary.

United States duty-free to about 952,000 short tons, commercial weight. Any quantities above that were subject to full-duty rates. As Figure II indicates, entries of Philippine sugar from 1935 through 1940 corresponded very closely to the duty-free limitation. While Sugar Act quotas originally assigned to the Philippines under the Jones-Costigan Act and the Sugar Act of 1937 tended to be larger than the Independence Act limitation, it was not profitable to ship the full-duty portion, and deficits were usually declared which brought the adjusted Sugar Act quota in line with the terms of the Independence Act. Since the Philippines commonly shipped all their sugar exports to the United States, production levelled off after the restriction under the Jones-Costigan Act in 1935 at a quantity sufficient to meet the duty-free quota plus local consumption.

World War II devastated the Philippine sugar industry and delayed Philippine independence. The Philippine Trade Act of 1946 carried sugar terms similar to the Independence Act and the quota provided in the Trade Act was incorporated into the Sugar Act of 1948. This quantity may enter the United States duty-free each year until July 4, 1954, when it becomes subject to 5 percent of the full-duty rate. The duty rate is to become progressively higher over the succeeding twenty years, reaching 100 percent as of January 1, 1973.

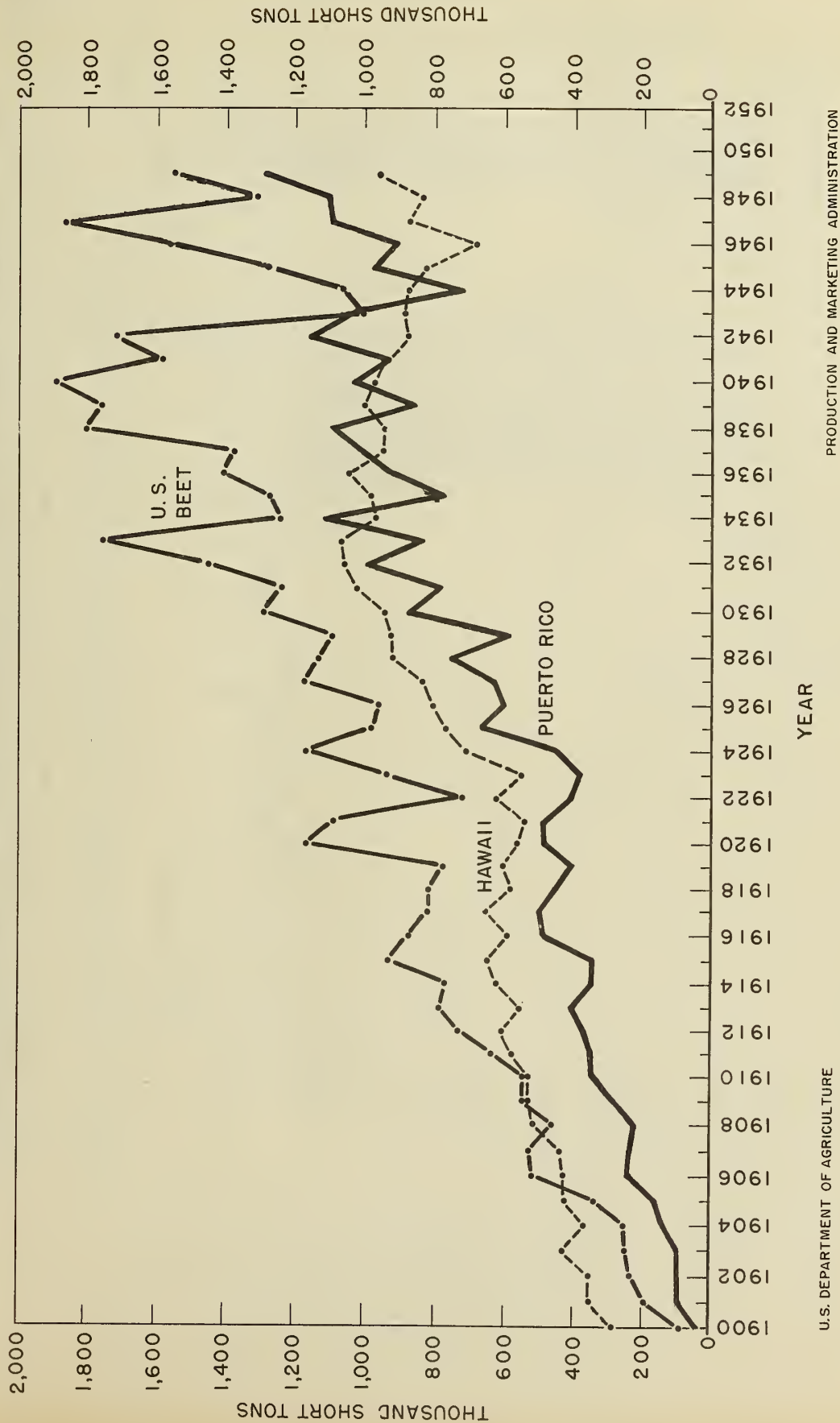
#### Cuba

Under the Jones-Costigan Act and the Sugar Acts of 1937 and 1948, Cuba's share in the U. S. market has been protected by the quota provisions. The current Act, however, is somewhat more advantageous to Cuba than its predecessors. It provides that in any case the Cuban quota shall not be less than that which would have been established under the provisions of the Sugar Act of 1937. The fixed quotas for domestic areas naturally give the advantage of increased U. S. consumption essentially to Cuba. In the proration of deficits the current Sugar Act is also more favorable to Cuban than the Act of 1937. Under the old Act, any Philippine deficit was prorated exclusively to foreign countries other than Cuba; now Cuba receives at least 95 percent of any Philippine deficit.

Under the Sugar Act of 1948, Cuba's basic quota has ranged between 1.9 and 2.5 million tons. Additional quota has accrued to Cuba as a result of deficits declared for the Philippines and domestic areas, and the U. S. has made several large purchases of sugar from Cuba for use in occupied areas overseas. These extra-quota opportunities provided by deficits and purchases for foreign aid are now diminishing.

FIGURE 1

## SUGAR- PRODUCTION IN U.S. BEET AREA, PUERTO RICO, AND HAWAII

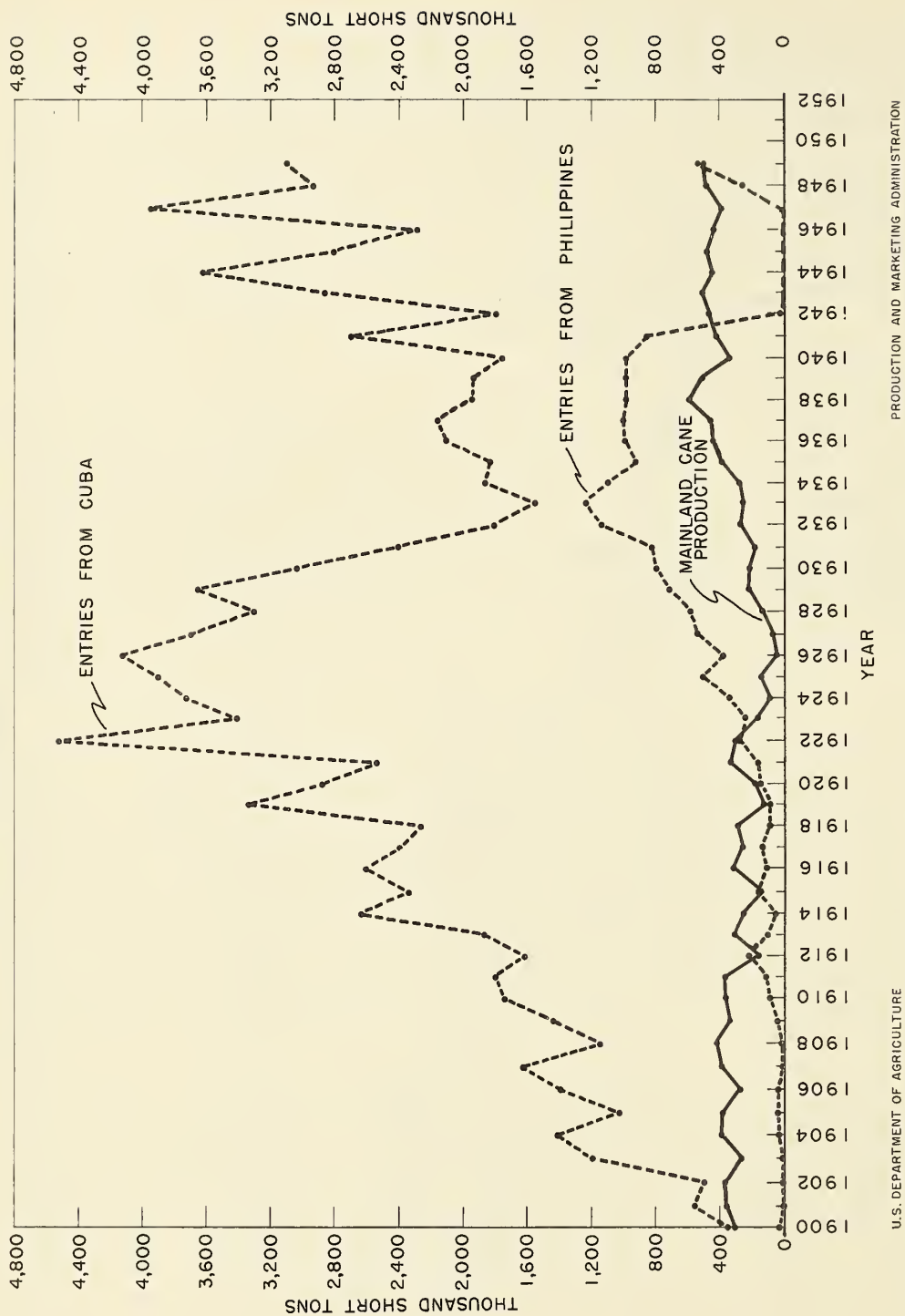


Sugar production in the United States beet area, Puerto Rico, and Hawaii has increased substantially over the past 50 years. The most significant period in its growth was the decade between 1920 and 1930. From 1930 through the end of World War II, production in Puerto Rico and the beet area did not continue the rate of increase of the 1920's; production in Hawaii declined.



FIGURE II

# SUGAR- U.S. MAINLAND CANE PRODUCTION AND ENTRIES INTO CONTINENTAL U.S. FROM CUBA AND THE PHILIPPINES



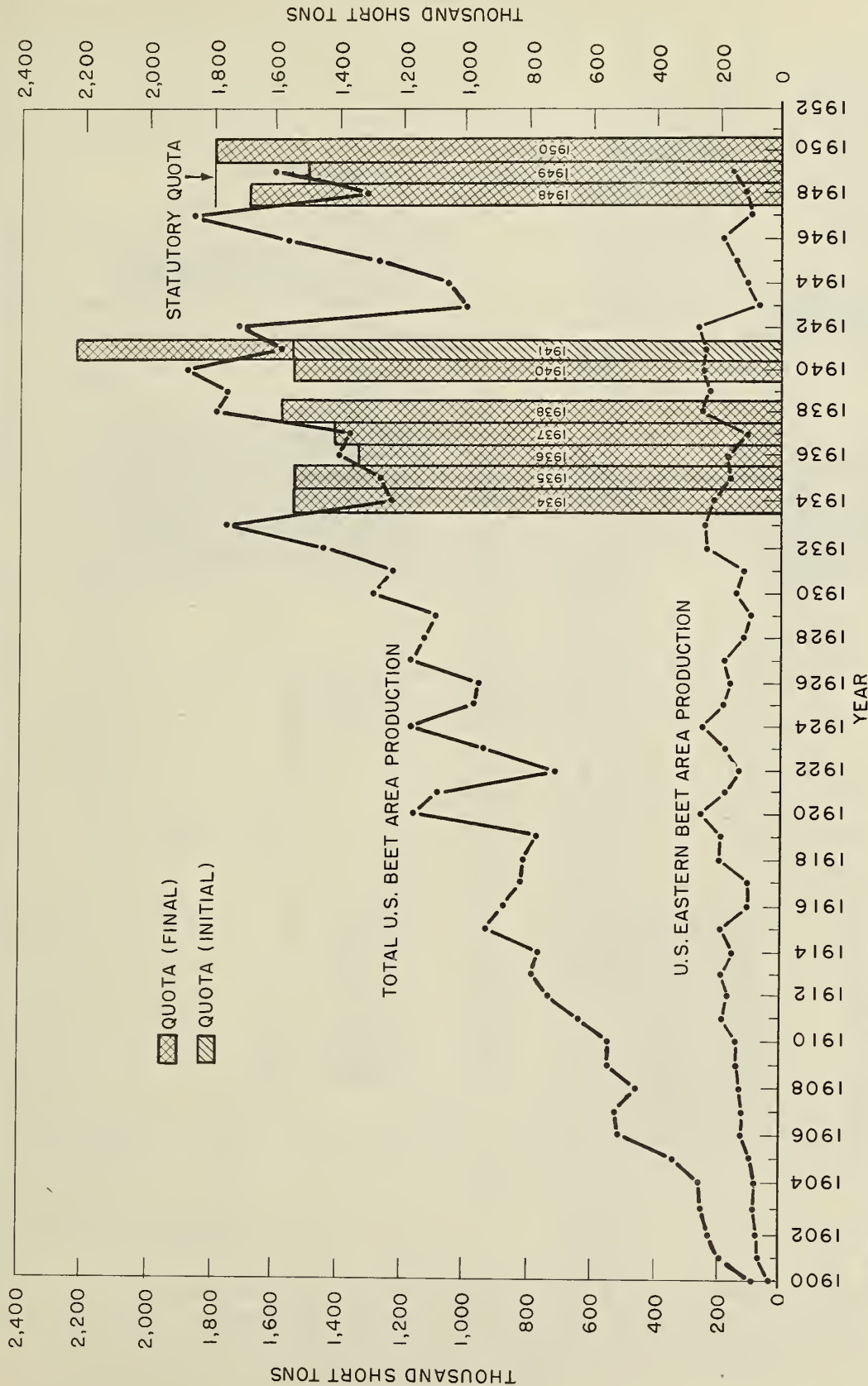
Production in the mainland cane area has been increasing slowly since it reached its low point in 1926. Florida, a producer since 1928, now contributes about one-fifth of the total.

Entries into the United States from Cuba reached their peak in 1922, before the domestic areas expanded their production sufficiently to supply the major portion of the United States requirements. Entries into the United States from the Philippines reached their peak in 1933, the year of smallest entries from Cuba since 1913.

FIGURE III

MARCH 1950

## UNITED STATES BEET SUGAR, MARKETING QUOTAS AND PRODUCTION



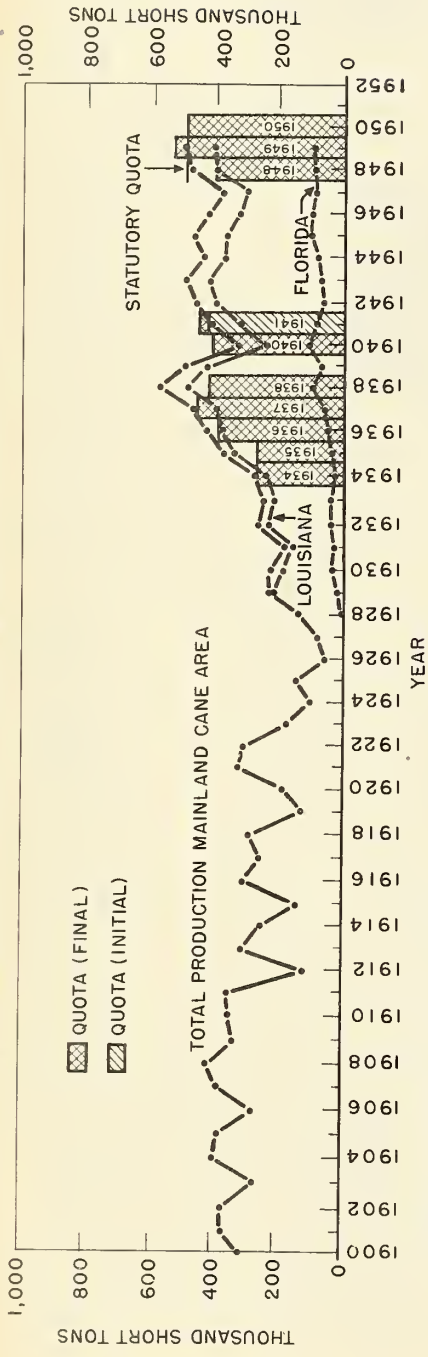
NOTE: 1950 QUOTA AS OF JAN. 1, 1950

U.S. DEPARTMENT OF AGRICULTURE

PRODUCTION AND MARKETING ADMINISTRATION

Except in the drought years of the mid-thirties and during wartime difficulties in the 1940's, total beet sugar production has maintained an upward trend. Almost all the increase in beet sugar production has occurred in the States west of the Mississippi.

UNITED STATES MAINLAND CANE SUGAR, MARKETING QUOTAS AND PRODUCTION

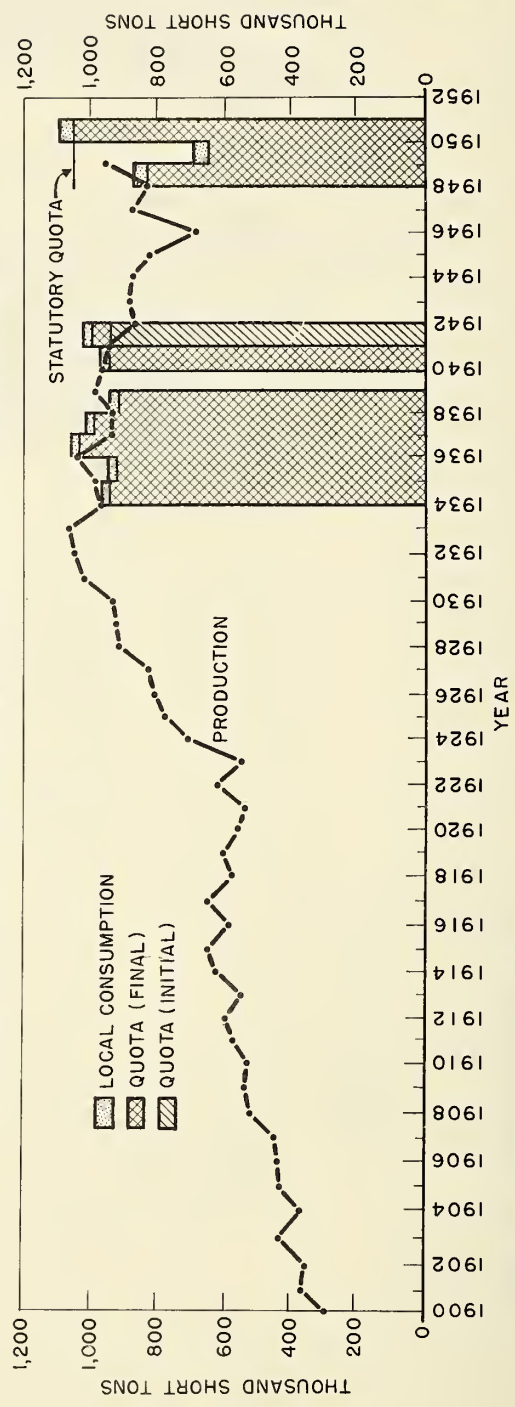


NOTE: 1950 QUOTA AS OF JAN. 1, 1950  
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PRODUCTION AND MARKETING ADMINISTRATION

Louisiana cane sugar production declined from 1900 to 1926 largely because of the prevalence of mosaic and red rot. Since more resistant varieties of cane were introduced, production has recovered and surpassed its old level. In 1928, sugarcane was first harvested in Florida. Production in Florida now comprises about one-fifth the total in the mainland cane area.

HAWAIIAN SUGAR, MARKETING QUOTAS AND PRODUCTION



NOTE: 1950 QUOTA AS OF JAN. 1, 1950  
U.S. DEPARTMENT OF AGRICULTURE

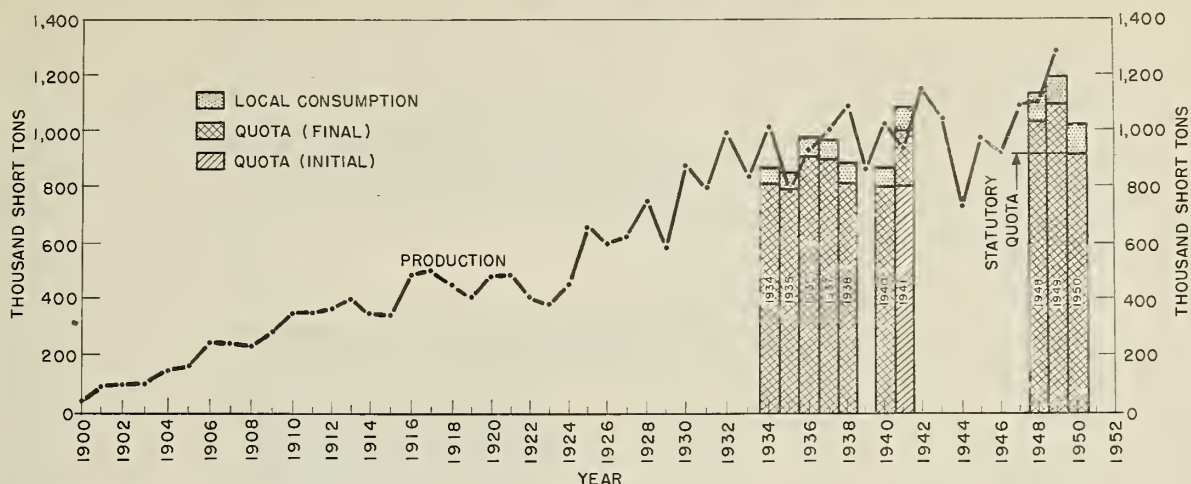
PRODUCTION AND MARKETING ADMINISTRATION

Hawaiian production increased most rapidly between 1924 and 1933, then levelled off and declined during the war period. 1949 production rose to about the 1941 level.



FIGURE V

## PUERTO RICAN SUGAR, MARKETING QUOTAS AND PRODUCTION



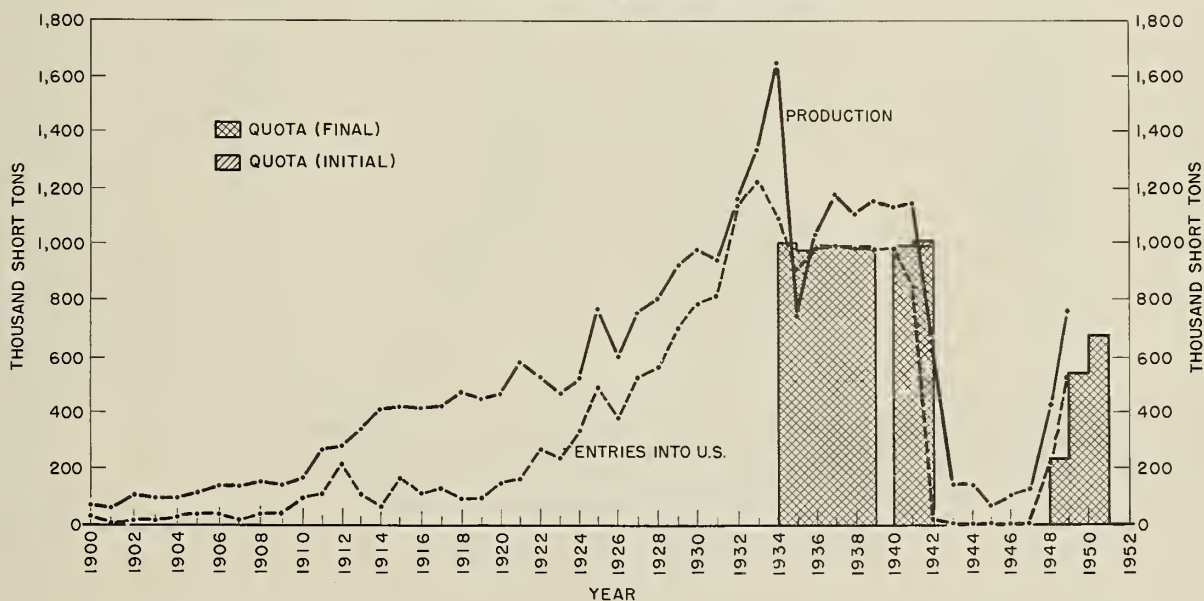
NOTE: 1950 QUOTA AS OF JAN. 1, 1950

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PRODUCTION AND MARKETING ADMINISTRATION

Puerto Rican production has been following a pronounced upward trend since 1923, except for the war years. Despite crop restrictions, production has exceeded marketing quotas plus local consumption in five out of the nine years during which quotas have been in effect for the full year.

## PHILIPPINE SUGAR PRODUCTION, ENTRIES INTO CONTINENTAL UNITED STATES AND MARKETING QUOTAS



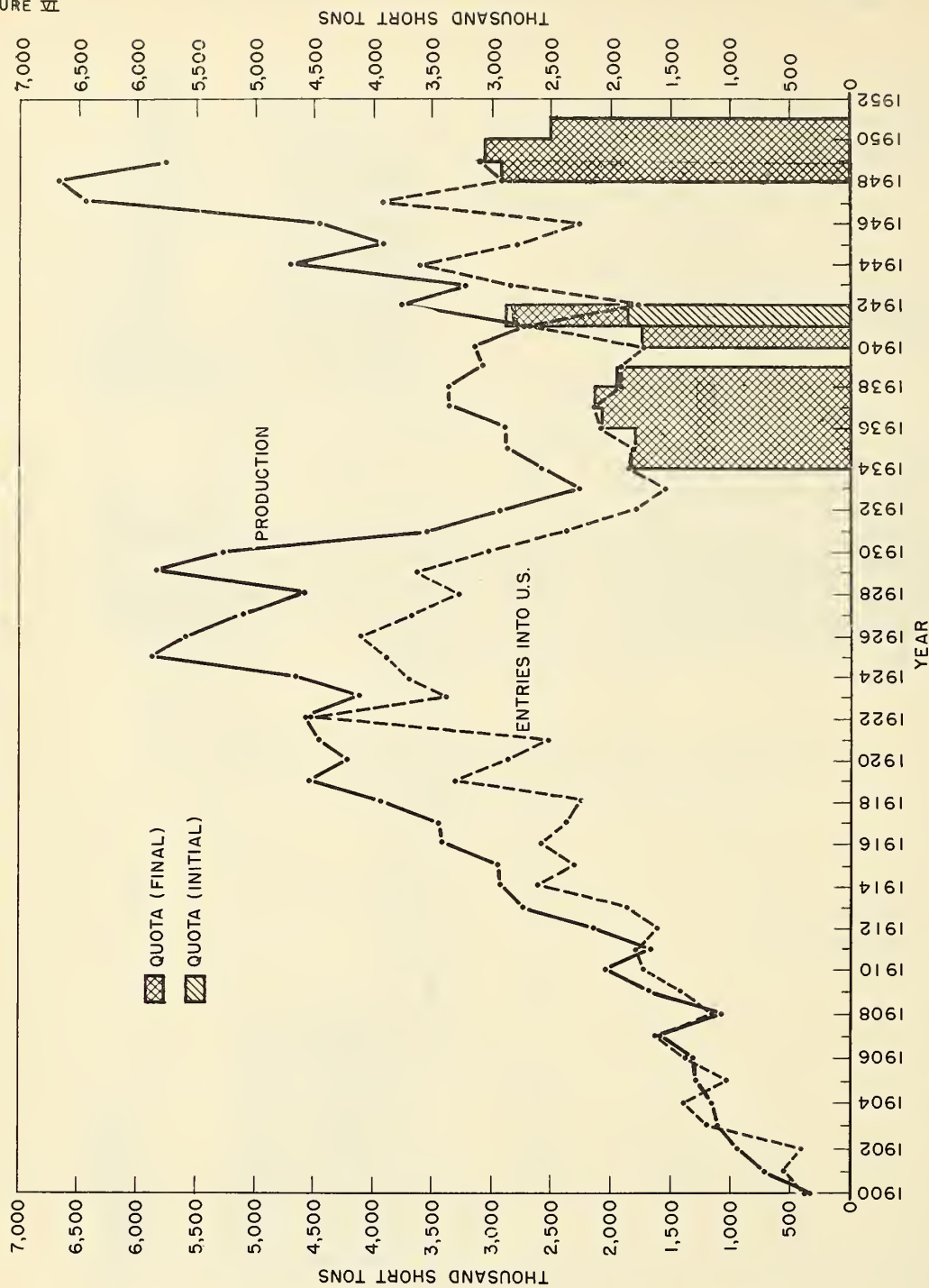
NOTE: 1950 QUOTA AS OF JAN. 1, 1950

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PRODUCTION AND MARKETING ADMINISTRATION

Philippine production reached a peak in 1934. Between 1934 and 1941, production dropped sharply and settled at a lower level, due chiefly to the limitation of duty-free sugar entries into the U. S. under the Philippine Independence Act. Production is now recovering from wartime devastation.

FIGURE VI

CUBAN SUGAR PRODUCTION, ENTRIES INTO CONTINENTAL UNITED STATES  
AND UNITED STATES MARKETING QUOTAS

NOTE: 1950 QUOTA AS OF JAN. 1, 1950

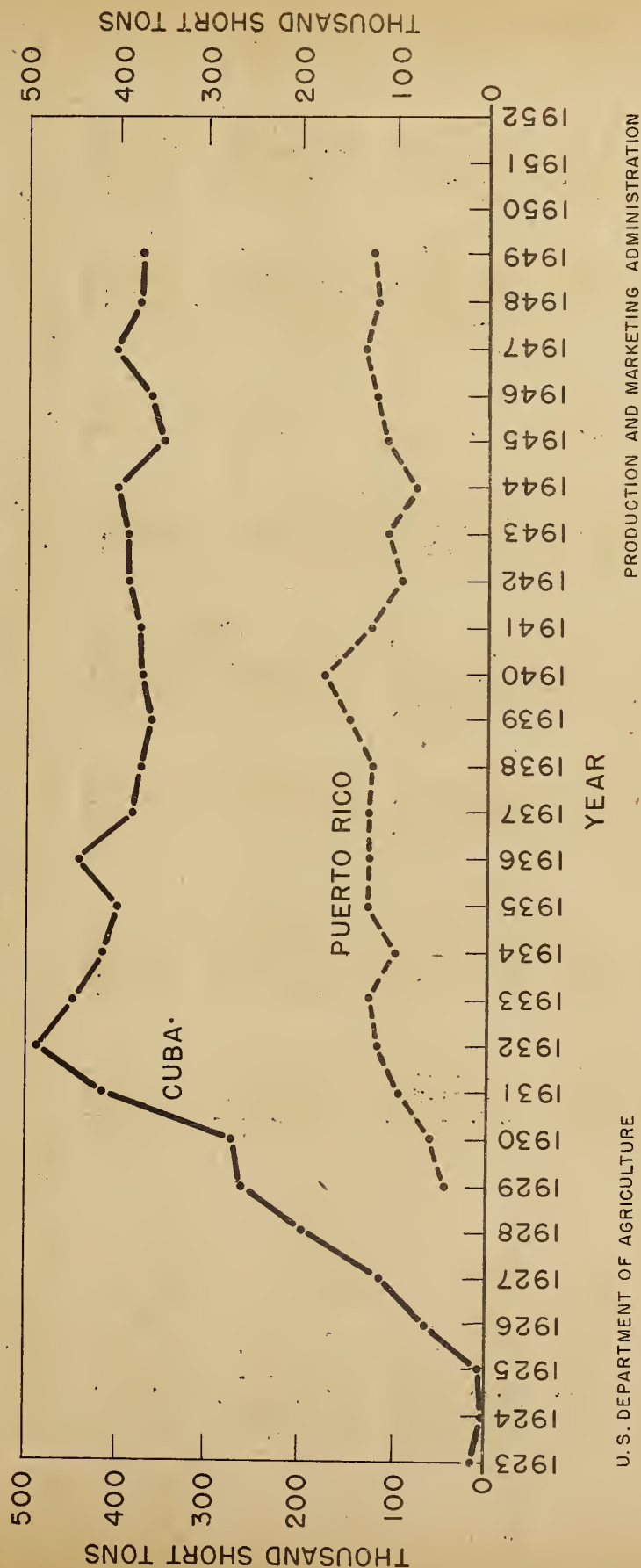
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PRODUCTION AND MARKETING ADMINISTRATION

Cuban production and marketings in the United States declined sharply between 1929 and 1933. Under the three Sugar Acts, Cuba's position recovered somewhat. Cuban sugar entries into the United States increased further during the war years. Production in 1947 and 1948 was at record levels.

FIGURE VII

# SUGAR FOR DIRECT CONSUMPTION: ENTRIES INTO CONTINENTAL U.S. FROM CUBA AND PUERTO RICO



Entries of direct-consumption sugar into the continental United States were not significant from Cuba until 1926 or from Puerto Rico until 1930. In the Sugar Acts of 1937 and 1948, limitations on the quantity of sugar which might be entered for direct consumption were established at 375,000 tons for Cuba and 126,033 tons for Puerto Rico.

With the exception of 1940, when no statutory limitation on the quantity of direct-consumption sugar to be entered from Puerto Rico was in effect from March 1 through October 15, entries of direct-consumption sugar from the two areas have adhered fairly closely to the fixed limitation even when quotas were not in effect.



Table 1  
SUGAR CONSUMPTION REQUIREMENTS AND QUOTAS BY AREA, 1934 TO DATE  
(Thousand Short Tons, Raw Value)

Quota Year	Date Issued or Effective	Consumption Requirements	Quotas							Foreign Countries Other Than	
			Domestic Beet	Mainland Cane	Hawaii	Puerto Rico	Virgin Islands	Phil. Islands	Cuba	Cuba	Cuba
1934	June 9, 1934	6,476	1,556	261	917	803	5	1,015	1,902	17	
	Aug. 17, 1935	6,476	1,556	261	948	807	5	1,006	1,866	26	
1935	Jan. 8, 1935	6,359	1,550	260	895	784	5	991	1,857	17	
	Aug. 17, 1935	6,359	1,550	260	926	788	5	982	1,823	25	
1936	Dec. 28, 1935	6,434	1,550	260	941	801	5	998	1,853	26	
	Apr. 10, 1936	6,610	1,342	319	1,007	857	6	1,068	1,982	27	
	July 2	6,813	1,342	380	1,036	882	6	1,099	2,039	28	
	July 28	6,813	1,342	389	1,059	902	6	1,001	2,085	29	
	Dec. 22	6,813	1,342	392	1,033	909	4	1,001	2,103	29	
1937	Dec. 12, 1936	6,683	1,614	271	977	832	5	1,036	1,922	27	
	Sept. 2, 1937	7,043	1,633	443	989	841	9	1,085	2,015	28	
	Sept. 10	7,043	1,633	443	989	841	9	998	2,015	115	
	Sept. 16	7,043	1,417	465	1,038	883	10	998	2,116	115	
	Dec. 8	7,043	1,417	472	984	897	10	998	2,149	115	
1938	Dec. 20, 1937	6,862	1,591	431	963	819	9	1,057	1,963	27	
	June 9, 1938	6,781	1,573	426	952	810	9	991	1,940	81	
	Nov. 15	6,781	1,584	429	922	816	4	991	1,954	81	
1939	By Presidential proclamation Title II of the Sugar Act of 1937, under which quotas totaling 6,755,000 tons had been established for 1939, was suspended on September 11, 1939. The suspension of Title II was terminated December 26, 1939, effective January 1, 1940.										
1940	Jan. 13, 1940	6,725	1,560	423	944	803	9	1,036	1,924	27	
	Mar. 20	6,608	1,550	420	938	798	9	1,004	1,863	26	
	Sept. 18	6,471	1,550	420	938	798	9	982	1,750	24	

Table 1 (Continued)

Quota Year	Date Issued or Effective	Consumption Requirements	Quotas					Foreign Countries Other Than Cuba	
			Domestic Beet	Mainland Cane	Hawaii	Puerto Rico	Virgin Islands	Phil. Islands	Cuba
1941	Dec. 21, 1940	6,617	1,550	420	938	798	9	1,007	1,869
	Apr. 11	6,852	1,589	431	962	818	9	983	1,960
	June 27	7,126	1,653	448	1,000	851	10	983	2,038
	Aug. 6	7,628	1,769	480	1,071	911	10	1,060	2,182
	Aug. 27	8,006	1,925	445 2/	994 2/	991	11	983	2,375
	Sept. 20	9,003	2,230	445 2/	994 2/	1,148	13	983	2,750
	Oct. 21	9,003	2,230	445	994	1,011 2/	13	983	2,887
1942-47 By Presidential proclamation Title II of the Sugar Act of 1937, under which quotas totaling 8,032,000 tons had been established for 1942, was suspended on April 13, 1942. The suspension of Title II was terminated November 28, 1947. Quotas under Sugar Act of 1948/effective January 1, 1948.									
1948	Jan. 9, 1948	7,800	1,848	513	900 2/	934	6	290 2/	3,239
	Mar. 3	7,500	1,848	513	900	934	6	290	2,944
	June 10	7,000	1,848	513	900	934	6	290	2,450
	July 15	7,000	1,848	413 2/	825 2/	982	6	290	2,577
	Aug. 4 and 12	7,200	1,848	413	825	982	6	240 2/	2,822
	Oct. 15	7,200	1,748 2/	413	825	1,008	6	240	2,896
	Dec. 9	7,200	1,688 2/	413	825	1,024	6	240	2,940
1949	Dec. 31, 1948	7,250	1,800	500	1,052	910	6	857	2,092
	June 16, 1949	7,250	1,600 2/	500	1,052	971	6	857	2,231
	June 30	7,250	1,600	500	1,052	971	6	557 2/	2,516
	Sept. 1	7,250	1,600	525	852 2/	1,019	6	557	2,642
	Sept. 20	7,500	1,600	525	852	1,019	6	557	2,889
	Sept. 29	7,500	1,500 2/	549	652 2/	1,091	6	557	3,093
1950	Dec. 29, 1949	7,500	1,800	500	1,052	910	6	682 2/	2,504

Note: The sum of the quotas for the individual areas does not always equal the consumption requirement because of rounding to thousands.

1/ Adjusted for revised figures for "most representative years".

2/ Deficit reallocated.

3/ First quota regulations under Sugar Act of 1937.

Table 2

U. S. BEET AND MAINLAND CANE SUGAR  
MARKETING QUOTAS AND PRODUCTION  
(1,000 short tons)

Calendar Year	U. S. Beet Sugar			Mainland Cane Sugar			
	Production		Total Domestic Beet Quota 3/	Production			Total 3/ Mainland Cane Quot
	Total 1/	Eastern Area 2/		Total 4/	La. 5/	Fla. 6/	
1900	92	32	-	305	305	-	-
1901	195	64	-	361	361	-	-
1902	234	64	-	368	368	-	-
1903	249	77	-	262	241	-	-
1904	252	73	-	392	375	-	-
1905	340	86	-	383	370	-	-
1906	519	122	-	272	258	-	-
1907	527	115	-	394	381	-	-
1908	460	119	-	414	398	-	-
1909	548	140	-	338	327	-	-
1910	546	140	-	362	350	-	-
1911	641	192	-	368	360	-	-
1912	741	173	-	166	157	-	-
1913	785	192	-	307	299	-	-
1914	773	161	-	252	248	-	-
1915	935	190	-	141	140	-	-
1916	878	117	-	317	310	-	-
1917	819	119	-	251	249	-	-
1918	814	204	-	290	286	-	-
1919	777	201	-	125	124	-	-
1920	1165	266	-	180	173	-	-
1921	1091	189	-	334	331	-	-
1922	722	138	-	302	301	-	-
1923	943	190	-	168	165	-	-
1924	1166	260	-	90	90	-	-
1925	977	197	-	142	142	-	-
1926	960	170	-	48	48	-	-
1927	1170	185	-	72	72	-	-
1928	1135	131	-	136	135	1	-
1929	1089	106	-	218	204	14	-
1930	1293	155	-	215	188	27	-
1931	1237	119	-	184	160	24	-
1932	1452	245	-	265	228	37	-
1933	1757	251	-	250	209	41	-
1934	1241	224	1556	270	242	28	261
1935	1268	164	1550	383	341	42	260
1936	1402	174	1342	435	384	51	392
1937	1375	117	1417	458	400	58	472
1938	1802	263	1584	581	489	92	429
1939	1760	237	-	507	437	70	-
1940	1894	256	1550	337	239	98	420
1941	1584	244	1550-2230 7/	417	322	95	420-445
1942	1725	270	-	462	398	64	-
1943	998	74	-	500	432	68	-
1944	1056	112	-	442	369	73	-

(continued)



Table 2  
(continued)

U. S. BEET AND MAINLAND CANE SUGAR  
MARKETING QUOTAS AND PRODUCTION  
 (1,000 short tons)

Calendar Year	U. S. Beet Sugar			Mainland Cane Sugar			
	Production	Eastern Area 2/	Total	Production			Total 3/ Mainland
	Total 1/		Domestic Beet Quota 3/	Total 4/	La. 5/	Fla. 6/	Cane Quota
1945	1280	145	-	473	370	103	-
1946	1569	196	-	431	331	100	-
1947	1867	103	-	384	297	87	-
1948	1314	114	1688	478	399	79	413
1949	1550 8/	162 8/	1500	495 8/	400 8/	95 8/	549
1950	-	-	1800	-	-	-	500

- 1/ Raw value of crop harvested chiefly in the fall of year shown. Sources: 1900-36, USDA Yearbook; 1937-48 from USDA Form SU-119.2.
- 2/ Sugar processed in factories in Ohio, Michigan, Illinois, Indiana, Wisconsin. (Illinois and Indiana estimated 1906-29). Sources: 1900-36 based on USDA Yearbook; 1937-1948, Sugar Branch, USDA. 1949 estimate based on data from Farmers and Manufacturers Beet Sugar Association. Early years omit small quantities of sugar processed in New York State.
- 3/ Quotas are final Sugar Act annual quotas for the years during which quotas applied for the full twelve months. 1950 quota is as of January 1. The statutory quotas according to the Sugar Act of 1948 are 1,800,000 tons for U. S. beet sugar and 500,000 tons for mainland cane sugar.
- 4/ For crop harvested chiefly in the fall of the year shown. 96° basis 1909-36; raw value thereafter. 1903-23 includes Louisiana and Texas. Sources: 1900-08, Willett and Gray; 1909-29 BAE. Totals for 1930 forward are sums of production in Louisiana and Florida, based on sources shown in 5/ and 6/.
- 5/ Sources: 1900-08, Willett and Gray; 1909-29, BAE; 1930-33, "Sugarcane for Sugar and Sirup" AMA-USDA (1941); 1934 forward, "Final Manufacturing Reports of Louisiana Sugar Mills", Louisiana State PMA office.
- 6/ Sources: 1928-29 BAE; 1930-33 and 1936, "Sugarcane for Sugar and Sirup"; 1934-35 and 1937, forward, Summary of Applications for Payment, Conditional Payments Division, Sugar Branch, PMA-USDA.
- 7/ Quotas here are initial and final quotas respectively. The consumption estimate was increased to 9 million tons on September 20, 1941, virtually lifting all marketing restrictions.
- 8/ Preliminary estimate.

Table 3 PUERTO RICO AND HAWAII: MARKETING QUOTAS AND SUGAR PRODUCTION  
(1,000 short tons)

<u>Puerto Rico</u>				<u>Hawaii</u>		
Calendar Year	Pro- duction 1/	<u>Quotas 2/</u>		Pro- duction 3/	<u>Quotas 2/</u>	
		<u>US Main- land</u>	<u>Local Con- sumption</u>		<u>US Main- land</u>	<u>Local Con- sumption</u>
1900	39	-	-	290	-	-
1901	90	-	-	360	-	-
1902	95	-	-	356	-	-
1903	95	-	-	438	-	-
1904	146	-	-	367	-	-
1905	162	-	-	427	-	-
1906	239	-	-	429	-	-
1907	235	-	-	440	-	-
1908	224	-	-	521	-	-
1909	283	-	-	535	-	-
1910	347	-	-	530	-	-
1911	350	-	-	582	-	-
1912	371	-	-	608	-	-
1913	398	-	-	557	-	-
1914	352	-	-	624	-	-
1915	346	-	-	651	-	-
1916	484	-	-	597	-	-
1917	503	-	-	654	-	-
1918	454	-	-	582	-	-
1919	406	-	-	607	-	-
1920	486	-	-	560	-	-
1921	491	-	-	546	-	-
1922	406	-	-	618	-	-
1923	379	-	-	554	-	-
1924	448	-	-	716	-	-
1925	661	-	-	781	-	-
1926	606	-	-	805	-	-
1927	630	-	-	832	-	-
1928	752	-	-	921	-	-
1929	587	-	-	925	-	-
1930	872	-	-	939	-	-
1931	788	-	-	1,018	-	-
1932	992	-	-	1,057	-	-
1933	834	-	-	1,066	-	-
1934	1,114	807	66 4/	959	948	28 4/
1935	781	788	61 4/	987	926	29 4/
1936	926	909	68 4/	1,042	1,033	30 4/
1937	1,003	897	72	944	984	31
1938	1,085	816	74	941	922	29
1939	858	-	-	994	-	-
1940	1,026	798	71	977	938	33
1941	940	798-1011 5/	86	947	938-944 5/	37
1942	1,156	-	-	870	-	-
1943	1,046	-	-	886	-	-
1944	729	-	-	875	-	-
1945	971	-	-	821	-	-

(continued)

Table 3 PUERTO RICO AND HAWAII: MARKETING QUOTAS AND SUGAR PRODUCTION  
(continued) (1,000 short tons)

Calendar Year	Pro- duction 1/	<u>Puerto Rico</u>		Pro- duction 3/	<u>Hawaii</u>	
		US Main- land	Local Con- sumption		US Main- land	Local Con- sumption
1946	916	-	-	680	-	-
1947	1,096	-	-	872	-	-
1948	1,108	1,024	100	835	825	46
1949	1,288	1,091	100	956	652	45
1950	-	910	105	-	1,052	45

- 1/ For crop harvested chiefly in calendar year shown. Sources: 1900-08 from Willett and Gray; 1909-36 from Bulletin 71 "Farm Prices and Price Relationships of Sugar and Sugarcane in Puerto Rico," by J. J. Serralles; 1937 forward from "Summary of Grinding Seasons of P. R. Mills," PMA Office records.
- 2/ Final Sugar Act quotas for the calendar years during which quotas applied for the full 12 months. 1950 quotas are as of January 1. The statutory mainland quotas according to the Sugar Act of 1948 are 910,000 tons for Puerto Rico and 1,052,000 tons for Hawaii.
- 3/ For crop harvested chiefly in calendar year shown. Sources: 1900-09 from Willett and Gray. 1910 following from Hawaiian Sugar Producers Association Sugar Manual. Through 1933, production is for the year ending September 30. Beginning with 1934, production figures refer to the calendar year. (Production of 127,000 tons of sugar from October 1 through December 31, 1933 is not included either with 1933 or 1934.)
- 4/ No local consumption quotas applied; therefore, distribution for local consumption was substituted in those years.
- 5/ Quotas here are initial and final quotas, respectively. The consumption estimate increased to 9 million tons on September 20, 1941, virtually lifting all marketing restrictions.



Table 4 CUBA AND THE PHILIPPINE ISLANDS: SUGAR PRODUCTION,  
ENTRIES INTO THE U. S., AND U. S. QUOTAS

Calendar Year	Cuba			Philippine Islands		
	Production 1/	Entries into U. S. 2/	U.S. 3/ Quotas	Production 4/	Entries into U. S. 2/	U. S. 3/ Quotas
	(1,000 short tons)					
1900	346	353	—	72	25	—
1901	712	550	—	63	2	—
1902	952	492	—	109	6	—
1903	1,119	1,198	—	94	9	—
1904	1,165	1,410	—	96	31	—
1905	1,303	1,029	—	120	39	—
1906	1,320	1,391	—	143	35	—
1907	1,599	1,618	—	141	13	—
1908	1,077	1,155	—	160	19	—
1909	1,695	1,431	—	143	42	—
1910	2,049	1,734	—	168	88	—
1911	1,685	1,805	—	269	115	—
1912	2,153	1,614	—	281	218	—
1913	2,758	1,873	—	345	102	—
1914	2,951	2,634	—	408	58	—
1915	2,963	2,336	—	421	163	—
1916	3,446	2,600	—	412	109	—
1917	3,469	2,395	—	425	134	—
1918	3,945	2,261	—	475	87	—
1919	4,554	3,336	—	453	88	—
1920	4,243	2,870	—	467	146	—
1921	4,469	2,530	—	589	165	—
1922	4,581	4,526	—	533	275	—
1923	4,141	3,401	—	475	238	—
1924	4,671	3,718	—	529	339	—
1925	5,894	3,901	—	780	493	—
1926	5,602	4,120	—	607	380	—
1927	5,121	3,690	—	767	531	—
1928	4,591	3,299	—	808	575	—
1929	5,857	3,650	—	934	711	—
1930	5,305	3,039	—	984	794	—
1931	3,545	2,408	—	958	818	—
1932	2,956	1,806	—	1,174	1,140	—
1933	2,266	1,552	—	1,343	1,230	—
1934	2,583	1,866	1,866	1,653	1,088	1,006
1935	2,883	1,830	1,823	755	917	982
1936	2,904	2,102	2,103	1,043	985	1,001
1937	3,379	2,155	2,149	1,186	991	998
1938	3,380	1,941	1,954	1,116	981	991
1939	3,094	1,930	—	1,149	980	—
1940	3,157	1,750	1,750	1,142	981	982
1941	2,734	2,700	1,869-2,887 <sup>5/</sup>	1,148	855	1,007-983 <sup>5/</sup>
1942	3,800	1,796	—	665	23	—
1943	3,230	2,857	—	150	—	—
1944	4,738	3,618	—	150	—	—
1945	3,923	2,803	—	75	—	—

(continued)

Table 4  
(continued)CUBA AND THE PHILIPPINE ISLANDS: SUGAR PRODUCTION,  
ENTRIES INTO THE U. S., AND U. S. QUOTAS

Calendar Year	Cuba			Philippine Islands		
	Production 1/	Entries into U. S. 2/	U.S. 3/ Quotas	Production 4/	Entries into U. S. 2/	U.S. 3/ Quotas
(1,000 short tons)						
1946	4,476	2,282	—	115	—	—
1947	6,448	3,943	—	184	—	—
1948	6,675	2,927	2,940	498	252	240
1949	5,763	3,095 <sup>6/</sup>	3,093	820	529 <sup>6/</sup>	557
1950			2,504			682

- 1/ Raw value of crop harvested chiefly in calendar year shown. Excludes the sugar equivalent of high-test molasses. Sources; 1900-09 Willett and Gray. 1910 - date, BAE.
- 2/ Sources: 1900-33 are imports of raw and refined sugar as reported by "Foreign Commerce and Navigation of the US." Entries for 1900-18 are on a fiscal year basis. 1934 forward are entries on a 96° basis compiled by the Sugar Branch, USDA. These are entries against quotas in the years when quotas applied. The years 1942-47 exclude Cuban sugar shipped to the US for refining and re-export to other countries under international allocations and invert molasses produced and shipped in lieu of raw sugar at the request of US agencies.
- 3/ Final Sugar Act annual quotas for the calendar years during which quotas applied for the full 12 months. 1950 quotas are as of January 1, 1950. The statutory quota for the Philippines is equivalent to 982,000 short tons, raw value.
- 4/ Sources: 1900-09 figures are total calendar year exports as given in USDA Yearbooks, and exclude local consumption of about 30,000 tons annually. From 1910 on, figures are from BAE, based on official sources and trade estimates, and refer to crop year ending in first half of year shown. Production of muscavado and panocha (low-grade sugars chiefly for domestic consumption,) is included.
- 5/ Quotas here are initial and final quotas, respectively. The final Philippine quota was smaller than initial quota because a deficit was reallocated. The consumption estimate was increased to 9 million tons on September 20, 1941, virtually lifting all marketing restrictions.
- 6/ Preliminary.

Table 5

SUGAR PRODUCTION: U.S. BEET AND MAINLAND CANE AREAS, HAWAII, AND PUERTO RICO  
 ENTRIES OF SUGAR INTO CONTINENTAL U.S.: FROM CUBA AND THE PHILIPPINES  
 (1,000 short tons)

Cal- endar Year	Production				Entries into continen- tal U.S. from	
	U.S.Beet	Mainland Cane	Hawaii	Puerto Rico	Cuba	Philippine Islands
1900	92	305	290	39	353	25
1901	195	361	360	90	550	2
1902	234	368	356	95	492	6
1903	249	262	438	95	1,198	9
1904	252	392	367	146	1,410	31
1905	340	383	427	162	1,029	39
1906	519	272	429	239	1,391	35
1907	527	394	440	235	1,618	13
1908	460	414	521	224	1,155	19
1909	548	338	535	283	1,431	42
1910	546	362	530	347	1,734	88
1911	641	368	582	350	1,805	115
1912	741	166	608	371	1,614	218
1913	785	307	557	398	1,873	102
1914	773	252	624	352	2,634	58
1915	935	141	651	346	2,336	163
1916	878	317	597	484	2,600	109
1917	819	251	654	503	2,395	134
1918	814	290	582	454	2,261	87
1919	777	125	607	406	3,336	88
1920	1,165	180	560	486	2,870	146
1921	1,091	334	546	491	2,530	165
1922	722	302	618	406	4,526	275
1923	943	168	554	379	3,401	238
1924	1,166	90	716	448	3,718	339
1925	977	142	781	661	3,901	493
1926	960	48	805	606	4,120	380
1927	1,170	72	832	630	3,690	531
1928	1,135	136	921	752	3,299	575
1929	1,089	218	925	587	3,650	711
1930	1,293	215	939	872	3,039	794
1931	1,237	184	1,018	788	2,408	818
1932	1,452	265	1,057	992	1,806	1,140
1933	1,757	250	1,066	834	1,552	1,230
1934	1,241	270	959	1,114	1,866	1,088
1935	1,268	383	987	781	1,830	917
1936	1,402	435	1,042	926	2,102	985
1937	1,375	458	944	1,003	2,155	991
1938	1,802	581	941	1,085	1,941	981
1939	1,760	507	994	858	1,930	980
1940	1,894	337	977	1,026	1,750	981
1941	1,584	417	947	940	2,700	855
1942	1,725	462	870	1,156	1,796	23
1943	998	500	886	1,046	2,857	-
1944	1,056	442	875	729	3,618	-
1945	1,280	473	821	971	2,803	-

(continued)



Table 5 (continued)

SUGAR PRODUCTION: U.S. BEET AND MAINLAND CANE AREAS, HAWAII, AND PUERTO RICO  
 ENTRIES OF SUGAR INTO CONTINENTAL U.S.: FROM CUBA AND THE PHILIPPINES  
 (1,000 short tons)

Calendar Year	Production				Entries into continen- tal U.S. from	
	U.S. Beet	Mainland Cane	Hawaii	Puerto Rico	Cuba	Philippine Islands
1946	1,569	431	680	916	2,282	-
1947	1,867	384	872	1,096	3,943	-
1948	1,314	478	835	1,108	2,927	252
1949	1,550 <u>1/</u>	495 <u>1/</u>	956 <u>1/</u>	1,288	3,093 <u>1/</u>	529 <u>1/</u>

Production figures 1900-08 are probably chiefly raw value; 1909-33 are 96° basis; 1934 to date, raw value. Entries through 1933 are total of raw and refined; from 1934 forward, they are raw value.

Crop-year production is attributed to the calendar year in which the major part of the harvest occurs. Entries, which prior to 1919 are chiefly on a fiscal year basis, have been attributed to the calendar year in which the fiscal year ends.

SOURCES of data are the same as those in Tables 2 through 4.

1/ Preliminary.

Table 6

DIRECT-CONSUMPTION SUGAR ENTRIES INTO CONTINENTAL UNITED STATES  
FROM CUBA AND PUERTO RICO  
(1,000 short tons)

Calendar Year	Cuba <u>1/</u>	Puerto Rico <u>2/</u>
1923	16	-
1924	1	-
1925	5	-
1926	66	-
1927	112	-
1928	197	-
1929	264	43
1930	272	60
1931	418	94
1932	488	118
1933	449	126
1934	415	100
1935	401	127
1936	443	127
1937	383	126
1938	375	123
1939	363	149
1940	375	175
1941	378	126
1942	387	96
1943	389	108
1944	400	78
1945	349	109
1946	366	120
1947	403	132
1948	375	122
1949	375 <u>3/</u>	126 <u>3/</u>
1950	-	-

1/ 1923-30, Foreign Commerce and Navigation of the U. S., imports of sugar polarizing 99° and above; 1931 forward, entries of sugar for direct consumption, on raw-value basis, compiled by the Sugar Branch, USDA. Prior to 1923, imports of refined sugar were negligible.

2/ Fiscal years 1929-30, refined sugar, from reports by Foreign Commerce of the U.S. Customs District of Puerto Rico, and Division of Foreign Trade Statistics, U. S. Dept. of Commerce; 1931 forward, calendar year entries of sugar for direct consumption, on raw-value basis, compiled by the Sugar Branch, USDA.

3/ Preliminary.

MARKETING SUGARCANE IN LOUISIANA

The marketing of sugarcane in Louisiana was the subject of a study conducted with funds made available under the Research and Marketing Act of 1946. A report on the study was issued by the Department in November 1949. It was written by Felix E. Stanley, Agricultural Economist, under the supervision of Dr. Phillip E. Jones, and Lawrence Myers, Director, Sugar Branch, and with the assistance of L. John Kutish and Dr. Wilmer Grayson, the latter of the Louisiana PMA Office in Baton Rouge.

The summary and recommendations contained in the report are reproduced below:

SUMMARY

The Louisiana sugar industry is composed of three major segments: (1) the production of sugarcane; (2) the processing of sugarcane into raw and direct-consumption sugars; and (3) the refining of raw sugar. The value of the cane crop (including Government payments), the value of byproducts, the value added in processing, and the value added in refining local and offshore raw sugars was approximately \$70,000,000 in 1948. The value of the cane crop to the growers was about one-half this amount.

The basis of purchase of sugarcane in Louisiana is f.o.b. delivery point. The growers haul the cane in tractor carts from their fields to nearby delivery points, where derricks are used to transfer the bundles of cane to larger vehicles. (These delivery-point derricks are known as field derricks.) The processors deliver the cane from the delivery point to the mills in trucks, standard-gage rail cars, and narrow-gage rail cars.

More than three-fourths of the sugarcane in Louisiana is transported less than 10 miles and 90 percent less than 15 miles.

The regulation of cane deliveries to Louisiana mills is controlled by individual grower delivery quotas, field derrick quotas, and the suspension of all deliveries when the cane supply on the mill yard exceeds a certain point.

Upon arrival at the sugar mill, the cane is weighed and unloaded onto mill feeder tables, the main mill carrier, or the mill storage pile. Large hoists are used for unloading the cane and for handling it in the mill yard.

In settling with growers, the mills measure the quantity of cane deliveries on the basis of standard tons. A standard ton is a ton of actual cane (with a trash adherence not exceeding 3 percent) adjusted for the sucrose content of the cane. Thus, both sucrose tests and trash tests are necessary in order to determine the number of standard tons of cane delivered by each grower.



Varying proportions of the cane are sampled for sucrose content at the different mills. The number of samples per grower per day depends on the volume of cane delivered by individual shippers. The range in the number of samples per shipper was from one to five or more per day.

Two basic types of sucrose tests are used by Louisiana mills for determining the sucrose content of the cane delivered by individual shippers. The more commonly used of these types is the small-mill test, in which samples of cane are crushed by a miniature set of grinding rolls. In the original subsamples, usually four to six stalks of cane are extracted from a load; but in most cases, a number of these sub-samples are allowed to accumulate before the canes are run through the small mill to extract the juice for sucrose analysis. Where the big-mill test is used, the sampling unit is the individual load of cane. A continuous sample of juice from the entire load is collected at the first set of crusher rolls in the regular commercial sugar mill.

Deductions for trash adhering to the cane were first made by Louisiana sugar mills on any appreciable scale in 1945. By 1948, the amount of trash deducted amounted to 200,000 tons, or 3,400 tons per mill.

The amount of trash deducted at the different mills varied considerably in 1948. The major factors responsible for the variations were weather conditions, the relative proportion of machine and hand-cut cane, the degree of competition for the available cane supply in the various subareas, and the lack of uniformity in sampling techniques.

The average size of trash samples taken at the different mills ranged from 25 to 125 pounds, with 50- and 100-pound samples predominating. The frequency of sampling for trash varied with the volume of cane deliveries by individual shippers, and the appearance of each load of cane with respect to trash. The range in the number of tests was from one per day for the smallest shippers to five or more for the largest.

The two basic methods of determining the price to be paid for sugarcane are the season's average price and the weekly average price of raw sugar. Twenty-one of the twenty-four mills surveyed used the season's average price of raws as the basis of settlement.

Most of the mills advance the growers 90 percent of the value of the cane as determined by the weekly average price of raw sugar during the week when the cane was delivered to the mills. Final settlement occurs at the end of the marketing season when the season's average price of raw sugar becomes known.

There was a decided similarity in marketing practices at cooperative and independent sugar mills. The major difference in them was in the method of settling with growers for cane at the cooperative mills. At those mills, the advance was 90 percent to nonmember growers and 80 percent to members. If the cooperative mill operated at a profit, the members were given a

patronage dividend in the form of ownership certificates. If the mill operated at a loss, the extent of the loss was determined and prorated to members on the basis of the number of tons of cane processed for each member.

Marketing methods and practices for sugarcane in Louisiana are profoundly affected by certain natural, economic, and institutional factors. Among the natural factors are the weather and the bulky and perishable nature of sugarcane. The most important economic factors are prices for sugar and its byproducts, the costs of the various factors of production, and the seasonal, high-investment nature of the processing segment of the industry. The cane purchase contract and the Sugar Act of 1948 are the major institutional factors which affect marketing methods and practices.

The Louisiana sugar industry has experienced financial difficulties in recent years because of a combination of technological and economic factors. Certain of these factors are beyond the control of the industry, but many are internal, and subject to some degree of industrial control. The major internal factors that relate to the financial problems at Louisiana mills are the declining yields of sugar per ton of cane, imperfections in the cane purchase contract, and a composite of unsound marketing practices that evolved during the war years.

#### RECOMMENDATIONS 1/

(1) That a purity clause be included in the cane purchase contract to discourage the marketing of old, stale cane and improperly topped cane.

(2) That par sucrose brackets be eliminated and a single sucrose percentage point be substituted for defining standard cane. This device should discourage the practice of topping for weight rather than for sucrose content, and should result in the marketing of a higher quality product.

(3) That the 3-percent tolerance for normal trash be eliminated. This should provide a positive incentive for growers to market a cleaner, or higher-quality cane. It might be necessary to adjust the pricing factor, or the scale of premiums and discounts, to compensate for the loss of income to growers which would result from the adoption of this recommendation.

(4) (a) That the cane purchase contract be in writing and bear the signature of the parties thereto. This should remove any doubt as to the obligations of each of the parties under the terms of the contract.

(b) That there be one basic cane purchase contract with respect to the sucrose content of standard cane. If the western growers are to contribute toward the higher freight charges for raw sugar to New Orleans, such contributions should be deducted from prices paid for sugarcane.

(5) That no sugar mill should use trash determinations as a competitive weapon in procuring cane.

(6) That the practice of determining the trash and sucrose content of sugarcane by means of derrick averages be eliminated. Individual grower practices should be identified with individual grower income. This basic premise is violated where the system of derrick averages is employed.



(7) That growers not abuse the practice of peddling sugarcane to competing mills.

(8) (a) That growers not cut more cane by mechanical methods than they can deliver within a reasonable period of time.

(b) That mills provide greater flexibility in delivery quotas, especially as regards custom-harvested cane.

(9) That cross-hauling of sugarcane be reduced to a minimum.

(10) That mills improve trash-sampling methods by taking larger and more frequent trash samples.

(11) That Louisiana processors take the initiative in solving the trash problem by delivering properly cleaned administration cane.

(12) That growers and processors consider the joint employment of supervisory personnel to coordinate harvesting and delivery operations.

#### On Industry Cooperation

The total proceeds available for sharing between growers and processors of sugarcane in Louisiana are reflected by the gross income from the sale of sugar, blackstrap, and from Sugar Act payments. The ratio for sharing such proceeds at any particular time might favor one of the groups at the expense of the other. In the long run, however, this ratio tends to gravitate toward a level which is fair and equitable to both groups. At present levels of capital investment, operating costs, and net returns, it appears that the sharing ratio approaches equity when two-thirds of the total proceeds accrue to the growers. Whatever total proceeds there may be, growers and processors will tend to share them on some basis near the 2 to 1 level. It is evident, therefore, that the Louisiana cane grower derives benefits in the ratio of 2 to 1 when proceeds increase, and suffers losses in the same proportion when proceeds decline. It would appear, therefore, that the growers have a much greater stake than the processors in any measure which has the ultimate effect of increasing industry returns whether this measure be increased marketing efficiency, improved quality of the product marketed, or greater sugar yields per ton of cane processed.

From the foregoing discussion, it would seem that the community of interests between growers and processors of sugarcane in Louisiana would provide a background which would assure concerted, cooperative action in facing the individual problems of either group, for in reality, the problems of one are the problems of the other.

As soon as both growers and processors realize that the interests of each are the interests of both, one of the prime requisites for solving the internal problems of the industry will have been met. Only cooperation from within can provide the basis for real progress in the industry.

1/ Provision has been made for a number of these recommendations in the determination of fair and reasonable prices for the 1949 crop of Louisiana sugarcane issued by the Secretary of Agriculture on September 26, 1949. The research leading up to the writing of these recommendations was begun in November 1948.



MARKETING OF FEED MOLASSES

A report entitled "The Marketing of Feed Molasses" was released in February. The report is the result of a study undertaken with funds made available under the Research and Marketing Act of 1946. It was written by L. John Kutish, until recently a member of the Sugar Branch, under the direction of Dr. Phillip E. Jones. A brief summary of the report is as follows:

The feeding value of molasses is about 70 percent, pound for pound, of the feeding value of corn. In addition, a value in excess of analysis is usually attributed to molasses, because of its ability to increase the palatability of feeds with which it is mixed.

One of the principal factors affecting the use of molasses for feeding purposes is the price relationships between molasses and corn. When the cost of  $6\frac{1}{2}$  gallons of molasses is less than the cost of a bushel of corn, it is usually economical to use molasses up to the recommended levels. In December 1949 the New York price of a bushel of corn was \$1.03 higher than that for  $6\frac{1}{2}$  gallons of blackstrap molasses. . . . This was a record spread.

Although the direct usage of molasses on farms is increasing, much the larger share of the feed molasses continues to be used in commercially mixed feeds; principally dairy feeds. Increased molasses usage by feed mixers since the war has been due to: (1) The increase in the molasses content of feeds which customarily include molasses as an ingredient; and (2) the usage of molasses in types of feed which formerly did not generally contain it. It is estimated that 177.5 million gallons were used in mixed feeds in the year ending June 30, 1949.

The small commercial feed mixers constitute a large potential market for molasses. This market has gone untapped in wide sections of the country for two reasons: (1) The special equipment necessary to mix the molasses is too expensive in relation to the volume of feed mixed; and (2) the cost of molasses is too high when it is purchased in small quantities.

In Wisconsin, the 1949 on-the-farm cost of molasses (26.7 cents) was more than ten times the amount received by the mills in interior Puerto Rico (2.5 cents). The most important marketing margins are: (1) Transportation from

the seaport terminal where the molasses cargo is discharged to the city where the molasses is barreled; (2) barreling, handling, and wholesale mark-up; and (3) transportation to the retail feed store, handling, and retail mark-up. Together, these three marketing factors accounted for about 70 percent of the on-the-farm cost of molasses, and they constituted about 80 percent of the total cost of marketing the product from interior Puerto Rican mills to Wisconsin farms.

The direct farm feeding of molasses is concentrated in the Southwest, the Rocky Mountain area, and the west coast. The practice appears to be especially well suited to the feeding of beef cattle. The systems for distributing molasses to the farmers in California and Texas are based on the servicing of large scale farming units by deliveries in tank trucks.

The popularity of grass silage is increasing rapidly. Production is estimated to have doubled and redoubled since 1944. A portion of the grass silage is ensiled with a preservative. Molasses is used extensively for this purpose, since it provides the additional sugars necessary to insure a desirable lactic acid fermentation in the silage. At least 75 percent of the feeding value of the molasses is returned to the silage. As long as molasses is available in volume at a reasonable price, it is probable that farmer demand for molasses for silage-making will increase.

Molasses in liquid form has certain advantages as an ingredient in mixed feeds. The stickiness and hygroscopicity of liquid blackstrap are both useful qualities, up to a point. On the other hand, molasses in liquid form has important disadvantages. The physical qualities of liquid molasses limit the amount of it that can be incorporated into mixed feeds with much of the present mixing equipment. Also, the heavy incorporation of liquid molasses increases the difficulty of maintaining balance in some formulas. The direct farm use of molasses is reduced by farmers' general dislike for the physical characteristics of liquid molasses, especially in 55-gallon barrels. Molasses in dried form would eliminate most of its unfavorable physical qualities. Dried molasses products are now on the market and one such product enjoys a rather wide distribution in the Midwest even though its retail price is more than double that of corn. If dried molasses could sell at a price no higher than that for corn, the market opportunities for it appear to be excellent. Because of economies inherent in the bulk handling and transportation of liquid molasses, it appears that the drying of molasses should be done in the general area of consumption of the product.



SUGAR INVENTORIES OF PRIVATE HOUSEHOLDS: JANUARY 1950

A fourth survey of sugar stocks in private households was made in January 1950 by the Bureau of the Census at the request of the Department. Surveys were also made in June 1948, January and July 1949. The report of the Bureau of the Census for January 1950 is reproduced in full below. The qualifications mentioned by the Bureau should be taken into consideration when evaluating the information disclosed by the survey.

There were about 231 million pounds of sugar on hand in private households in January 1950, according to the results of a sample survey conducted by the Bureau of the Census for the Department of Agriculture. This amount was 30 million pounds less than the total found in July and January 1949 when similar surveys were conducted. A large part of the reduction between July 1949 and January 1950 took place in rural-farm households where large supplies of sugar may be kept during the summer months because of home canning activities.

There seemed to be some tendency for a reduction over the past year in the proportion of households having relatively large sugar supplies. Only 18 percent of the households had over 7 pounds of sugar on hand in January 1950 as compared with 23 percent in January a year ago and 22 percent in July 1949. For all households, the average supply declined from 6 1/4 pounds in both January and July of 1949 to 5 1/2 pounds in January 1950. In spite of the decline from July 1949, rural-farm households in January 1950 still had substantially larger sugar supplies on the average than urban and rural-nonfarm households. The average sugar supply for rural-farm households was about double that for urban households and about 1 1/2 times that for rural-nonfarm households.

The results of the survey are subject to errors of response and nonresponse as well as sampling variability, which may be large in cases where the quantities shown are relatively small. Therefore, the smaller estimates should be used with caution as explained in the section on source and reliability of the estimates.

The results are summarized in tables 7\* and 8\* attached.

DEFINITIONS AND EXPLANATIONS

Coverage.--The data relate to households, that is, persons living alone or groups of persons living together in dwelling units as defined by the Census. Persons living in rooming units or in similar places are excluded.

Urban and rural areas.--The urban and rural areas are those that were classified as urban or rural on the basis of the results of the 1940 census. All incorporated places having 2,500 or more inhabitants in 1940 were classified as urban, together with certain additional areas declared urban under special rules. All other areas were classified as rural.



Farm and nonfarm classification.--The classification of the rural households as farm and nonfarm is based on residence at the time of the enumeration, not on whether the person was engaged in agricultural work. Thus, the rural-farm households are those living on farms at the time of the survey, in areas that were classified as rural in 1940. Rural-nonfarm households live in a wide variety of places ranging from isolated areas in the open country to unincorporated and small incorporated places adjacent to large cities.

Source and reliability of the estimates.--The estimates presented here are based on data obtained in connection with the Census Bureau's monthly population sample survey, the sample consisting of about 25,000 households located in 68 areas in 42 States and the District of Columbia. The information was obtained by personal interview with one representative of each household, usually the housewife.

Since the estimates are based on sample data, they are subject to sampling variability. For example, the sugar supply in private households was estimated at 231 million pounds in January 1950. The chances are about 19 out of 20 that the differences between the estimate and the figure which would have been obtained from a complete census is less than 13 million pounds. The estimated change in sugar inventories between July 1949 and January 1950 was 33 million pounds. The chances are about 19 out of 20 that the difference between the estimated change and the change which would have been observed from complete censuses is less than 8 million pounds. The average sugar inventory per household was estimated at 5 1/2 pounds. The chances are about 19 out of 20 that the difference between the estimated average and the average which would have been obtained from a complete census is less than 1/4 pound. The approximate sampling variability of estimated percentages for January 1950, July and January 1949, and June 1948, is indicated by the following table. The chances are about 19 out of 20 that the difference between the estimated percentage and the percentage which would have been obtained from a complete census is less than the sampling variability shown below.

<u>Estimated Percentage</u>	<u>Sampling Variability</u>
5	0.5
10	0.8
25	1.3
50	1.5
75	1.3

In addition to sampling variability, the estimates are subject to biases due to errors of response and to nonreporting. These biases may be particularly large in a survey such as this. Respondents' replies are not always accurate and may be influenced by such personal factors as fear of rationing, fear of disapproval if the actual number of pounds of sugar on hand were reported, and the feeling that the government has no right to ask such a personal question. The possible effect of such biases is not included in the measures of reliability shown above.

Table 7#--SUGAR SUPPLY IN PRIVATE HOUSEHOLDS--JANUARY 1950

Table 7\*.--SUGAR SUPPLY IN PRIVATE HOUSEHOLDS: JANUARY 1950, JANUARY AND JULY 1949, AND JUNE 1948

Area	January 1950			July 1949			January 1949			June 1948	
	Total (millions of pounds)	Average per household (pounds)	Total (millions of pounds)	Average per household (pounds)	Total (millions of pounds)	Average per household (pounds)	Total (millions of pounds)	Average per household (pounds)	Total (millions of pounds)	Average per household (pounds)	
All households.	231	5 1/2	264	6 1/4	258	6 1/4	307	7 1/2			
Urban.....	123	4 1/2	129	5	133	5 1/4	149	6			
Rural-nonfarm....	55	5 1/2	60	6 1/4	56	6	66	7 1/2			
Rural-farm.....	53	8	75	10 1/2	69	10	92	13 1/4			

Table 8\*.--PERCENTAGE DISTRIBUTION OF HOUSEHOLDS BY SIZE OF SUGAR SUPPLY:  
JANUARY 1950, JANUARY AND JULY 1949, AND JUNE 1948

Number of pounds of sugar on hand	Percent of total households			
	January 1950	July 1949	January 1949	June 1948
All households.....	100.0	100.0	100.0	100.0
2 or less.....	27.6	27.0	26.1	24.2
3 to 7.....	54.0	51.2	51.4	48.6
8 to 12.....	13.3	14.4	15.1	16.8
13 and over.....	5.1	7.4	7.5	10.4

\*Tables 1 and 2 in original report.



"Invisible" Supplies of Sugar - October - December, 1949

Reports from 1,381 retailers, wholesalers and industrial users of sugar, covering the fourth quarter of 1949, are summarized in Table 9.

Table 9. SUGAR STOCKS, RECEIPTS, AND DELIVERIES OR USAGE,  
OCTOBER-DECEMBER, 1949, AS REPORTED BY 1,381 RETAILERS,  
WHOLESALEERS AND INDUSTRIAL USERS

	Short tons, raw value
Stocks, October 1	226,382
Receipts, October-December	783,531 <sup>1/</sup>
Deliveries or usage, October-December	820,291
Stocks, December 31	189,622

<sup>1/</sup> These receipts represent approximately 50% of the total deliveries of sugar by primary distributors (sugar refiners, processors, and importers) during the fourth quarter of 1949.

Stocks reported on October 1 and December 31, 1949, and on the same dates in previous years were as follows:

Year	Number of companies reporting	Stocks Oct. 1 and Dec. 31 (short tons, raw value)		Stocks on Dec. 31 as percentage of stocks on Oct. 1 (percent)	Percentage of deliveries by primary distri- butors represented by receipts of companies reporting (percent)
		Oct. 1	Dec. 31		
1938	1,387	258,117	318,206	123	46
1939	1,391	372,840	340,195	91	52
1940	1,295	398,382	417,819	105	44
1947	1,022	229,205	277,802	121	51
1948	1,465	260,481	248,490	95	50
1949	1,381	226,382	189,622	84	50

Stocks held by 759 firms on December 31, 1949, were 27 percent smaller than those held by the same firms on October 1, 1949 and 23 percent smaller than those on December 31, 1948, whereas deliveries or usage during October-December, 1949 and during the calendar year 1949 were 4 percent and 6 percent higher, respectively, than during the corresponding periods of 1948.



The receipts of these 759 firms represent from 36 to 41 percent of total deliveries by primary distributors during the fourth quarter of 1948 and 1949 and the two calendar years. The reports for those periods are summarized in Table 10.

Table 10. SUGAR STOCKS, RECEIPTS AND DELIVERIES OR USAGE,  
OCTOBER-DECEMBER AND CALENDAR YEAR, 1948 AND 1949, FOR 759 FIRMS  
WHICH REPORTED FOR ALL PERIODS

	<u>Beginning Stocks</u>	<u>Receipts</u> (short tons, raw value)	<u>Deliveries or Usage</u>	<u>Ending Stocks</u>
<u>October-December, 1948</u>				
Retailers (80)	31,443	164,458	172,033	23,868
Wholesalers (300)	28,852	153,221	158,884	23,189
Industrial Users (379)	<u>83,053</u>	<u>328,682</u>	<u>325,903</u>	<u>85,833</u>
Total (759)	143,348	646,362	656,820	132,890
<u>October-December, 1949</u>				
Retailers	22,305	173,253	181,654	14,404
Wholesalers	31,039	144,113	157,522	17,630
Industrial Users	<u>86,958</u>	<u>324,156</u>	<u>340,843</u>	<u>70,271</u>
Total	140,802	641,522	680,019	102,305
<u>Calendar Year, 1948</u>				
Retailers	26,748	684,441	687,321	23,868
Wholesalers	28,372	683,215	688,398	23,189
Industrial Users	<u>92,379</u>	<u>1,307,499</u>	<u>1,314,045</u>	<u>85,833</u>
Total	147,499	2,675,155	2,689,764	132,890
<u>Calendar Year, 1949</u>				
Retailers	23,868	743,126	752,590	14,404
Wholesalers	23,189	747,346	752,905	17,630
Industrial Users	<u>85,833</u>	<u>1,330,024</u>	<u>1,345,586</u>	<u>70,271</u>
Total	132,890	2,820,496	2,851,081	102,305

LIQUID SUGAR DISTRIBUTION AND IMPORTS AND TOTAL SUGAR SUPPLY,  
1935-49

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Previously published sugar distribution data have combined liquid and crystalline sugar. However, in Table 11 the data for refiners have been modified by making a distinction between deliveries of crystalline and domestically-produced liquid sugar for the period 1941 to 1949. The small quantity of liquid sugar produced by beet sugar processors during 1948-49 has not been shown separately. Annual data on liquid sugar imports from Cuba and Dominican Republic are also shown for the period 1935 and 1949. These imports have been added to domestic sugar distribution to give a total available supply of liquid and crystalline sugar for U. S. consumption.

"Liquid sugar imports" in Table 11 include only liquid sugar as defined in the Sugar Acts of 1937 and 1948. These figures are found in Department of Commerce statistics in combination with edible molasses under the classification "Molasses and sugar sirup, n.s.p.f." Liquid sugar imported during 1942-44 was primarily colored invert sirups from Cuba. The data for 1942-44 do not include importations of large quantities of "colored and flavored sirups" later classified as liquid sugar.

TABLE 11 -- CALENDAR YEAR DISTRIBUTION, BY PRIMARY DISTRIBUTORS, OF SUGAR AVAILABLE FOR CONTINENTAL UNITED STATES CONSUMPTION AND IMPORTS OF LIQUID SUGAR 1935-49  
(thousands of short tons, raw value)

Year	Distribution									
	Refiners' 1/		Beet Pro- cessors	Importers	Mainland		For U.S. Con- sumption <sup>4/</sup>	Liquid Sugar Imports	Total for U.S. Consumption	
	Raws	Crystalline			Liquid	Cane D.C.				Total Exports <sup>3/</sup>
1935	10		4,565	1,479	615	86	6,755	121	50	6,684
1936	11		4,519	1,365	719	157	6,771	65	70	6,776
1937	14		4,715	1,245	615	156	6,745	74	39	6,710
1938	10		4,595	1,449	563	92	6,709	66	39	6,682
1939	6		4,469	1,811	573	141	7,000	132	42	6,910
1940	8		4,719	1,551	694	97	7,069	178	38	6,929
1941	9	5,324		1,953	564	96	8,140	70	39	8,109
1942	6	3,271		1,703	467	75	5,675	209	3	5,469
1943	15	4,416		1,526	516	124	6,802	467	4	6,339
1944	10	5,339		1,156	523	165	7,461	314	30	7,177
1945	5	4,460		1,043	459	98	6,331	291	0	6,040
1946	4	3,767		1,380	480	148	6,024	403	0	5,621
1947	9	5,147		1,575	533	116	7,680	232	0	7,448
1948	2	4,786		1,657	512	98	7,424	77	18	7,365
1949	4	5,111		1,487	512	135	7,624	44	33	7,613

1/ Liquid sugar distribution unavailable, 1935-40.

2/ Includes sugar in form of flavored sirup from Mexico.

3/ For 1934-41 exports as reported by Dept. of Commerce; for subsequent years, deliveries for export as reported by primary distributors; war years include deliveries for liberated areas, lend-lease and military relief.

4/ For war years, includes deliveries for use by U.S. Military Forces at home and abroad.

5/ Does not include flavored sugar sirups which were not classified as liquid sugar at time of importation.

6/ Preliminary.



DELIVERIES OF SUGAR, DEXTROSE, AND CORN SIRUP BY TYPE OF BUYERSugar and Dextrose

In 1948, the cooperation of the primary distributors of sugar and dextrose was solicited in connection with the establishment of a quarterly report of deliveries of these products to the various trades within the continental United States. This information was requested primarily for use in connection with a research project with respect to competitive relationships between sugar and corn sweeteners. Refiners, importers, and beet processors whose volume represents over 95 percent of the sugar distributed in the United States, and all of the dextrose manufacturers, agreed to submit such reports beginning with the first quarter, 1949.

The information disclosed by these reports for 1949 is summarized in Tables 12 through 28. In these new reports, the primary distributors of both sugar and dextrose have reported deliveries classified by product or business of buyer for the New England, Middle Atlantic, Southern, North Central and Western areas of the United States. For sugar, these reports also provide data on deliveries by type of sugar - crystalline and liquid-- and by type of primary distributor -- beet processor, cane refiner and importer of direct consumption sugar -- for each type of buyer. Deliveries of sugar in packages of less than 100 pounds also are reported by primary distributors of sugar. Deliveries, by type of sugar and by type of primary distributor, are included only for the United States; area data may not be published because they reveal information concerning individual company operations.

In determining deliveries by areas, the following classification of states was used:

New England States - include Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut.

Middle Atlantic States - include New York, New Jersey, and Pennsylvania.

North Central States - include Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.

Southern States - include Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas.

Western States - include Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, and California.

In reporting deliveries, sweetener-containing products were classified into seven major groups as follows:

Bakery and allied products: Bread, rolls, sweet goods, dessert preparations, doughnuts, biscuits, crackers, cookies, pretzels, crullers, baking mixes and batters, bakers' supply houses, breakfast and other prepared cereals and cereal paste products.

Confectionery and related products: Candy, candied fruits, and other confectionery products, chocolate and cocoa products, chewing gum, confectioners' supply houses.

Ice cream and dairy products: Ice cream, ice cream mix, ices, sherbets, frozen custard, sweetened condensed milk (bulk and case goods), creamery butter, cheese and cheese spreads, chocolate milk, miscellaneous dairy products.

Beverages: Alcoholic and non-alcoholic beverages, drink mixes, fountain sirups, flavoring and coloring extracts.

Canned, bottled and frozen foods, jams, jellies, preserves, etc.: Canned, frozen, bottled and dried fruits, vegetables, fruit juices, vegetable juices, soups, soup mixes, baked beans, pickled fruits and vegetables, relishes, vegetable sauces, and seasoning, jams, jellies, preserves, marmalades, fruit butters, mayonnaise, and condiments.

Multiple and all other food uses: Deliveries to buyers making products falling into two or more of the above categories and for which estimates of amounts going into each category are not feasible. Also, deliveries for miscellaneous food uses, such as meat curing, sirup blending, etc.

Non-food uses: All non-food uses, such as tobacco, pharmaceutical, etc.

A considerable volume of sugar is sold through wholesale and retail grocers, jobbers, sugar dealers, and to companies manufacturing a variety of sugar-containing products. This makes it difficult for primary distributors to know the end use of all sugar sold by them. However, the information as reported will give a fairly dependable basis for keeping abreast of trends in sugar consumption in each use category. Since most of the dextrose sales are made directly to end users, the data as reported approximates the receipts of this product for each type of user. For use in connection with the study of competitive relationships between sweeteners, calendar-year-1949 deliveries of sugar to wholesale grocers, dealers, "multiple food uses," etc. are being statistically apportioned among the principal sugar-using trades. Data also are being assembled relative to annual deliveries of both sugar and dextrose according to use category for the years 1935-1948. Further information relative to these data will appear in subsequent issues of Sugar Reports.

#### Corn Sirup

For several years the manufacturers of corn sirup have reported to Price Waterhouse & Company their sales according to trade classification. This information is then made public by the Grain Branch, PMA. A summary of the information pertaining to the four quarters of 1949 appears in Table 13.



Table 12

DEXTROSE: TOTAL SALES, BY TYPE OF BUYER, YEAR ENDING DECEMBER 31, 1949  
(100 lb. bags)

United States

<u>Product or Business of Buyer</u>	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>	<u>Total Year 1949</u>
Bakery and allied products; cereals and cereal products	923,083	739,869	952,042	863,688	3,478,682
Confectionery and related products	67,271	68,421	77,418	64,163	277,273
Ice cream and dairy products	59,837	80,656	94,133	36,061	270,687
Beverages	165,260	193,918	236,481	139,141	734,800
Canned, bottled, frozen foods; jams, jellies, preserves, etc.	93,566	78,805	463,598	149,272	784,241
Multiple and all other products	71,531	64,998	82,875	86,584	305,988
Non-food products	80,779	62,251	77,917	86,592	307,539
Wholesale grocers; jobbers; retail grocers; chain stores; super markets	51,715	43,802	66,812	45,698	208,027
Other sales including sales to Government agencies	19,599	22,564	31,924	21,327	95,414
<b>TOTAL DOMESTIC SALES <sup>1/</sup></b>	<b>1,532,641</b>	<b>1,355,284</b>	<b>2,083,200</b>	<b>1,491,526</b>	<b>6,462,651</b>

Source: Reports of dextrose manufacturers to Sugar Branch, P.M.A.

<sup>1/</sup> Excludes packaged dextrose; represents sales in continental United States and dextrose manufacturer's intra-company usage of dextrose.

Table 13

CORN SIRUP UNMIXED: TOTAL SALES, AS DISTRIBUTED AMONG DIFFERENT TRADES, BY QUARTERS & TOTAL, 1949

UNITED STATES

<u>Product or Business of Buyer</u>	<u>First Quarter</u> (100 pounds)	<u>Second Quarter</u> (100 pounds)	<u>Third Quarter</u> (100 pounds)	<u>Fourth Quarter</u> (100 pounds)	<u>Total</u> (100 pounds)
Bakery and allied products, cereals and cereal products	230,560	249,309	235,145	273,557	988,571
Confectionery and related products	1,630,110	1,480,359	1,823,696	2,155,033	7,089,198
Ice cream and dairy products	60,646	99,500	90,893	54,905	305,944
Breweries and brewery supply houses	(89,899)	(129,075)	(114,409)	(88,252)	(421,635)
Soft drinks	(1,557)	(2,106)	(1,176)	(483)	(5,322)
<b>Total Beverages</b>	<b>91,456</b>	<b>131,181</b>	<b>115,585</b>	<b>88,735</b>	<b>426,957</b>
Canned, bottled, frozen foods, jams, jellies, preserves, etc.	138,278	170,541	213,285	162,506	684,610
Blended sirups	(858,922)	(673,578)	(669,222)	(872,079)	(3,073,801)
Miscellaneous food products	(89,414)	(99,011)	(135,968)	(135,504)	(459,897)
<b>Total Multiple and All other Products</b>	<b>948,336</b>	<b>772,589</b>	<b>805,190</b>	<b>1,007,583</b>	<b>3,533,698</b>
Non-food products	95,322	91,004	111,820	126,076	424,222
Wholesale grocers, jobbers, sugar dealers	51,341	63,728	62,587	72,833	250,489
<b>TOTAL DOMESTIC SALES</b>	<b>3,46,049</b>	<b>3,058,211</b>	<b>3,458,201</b>	<b>3,941,228</b>	<b>13,703,699</b>
<b>TOTAL DOMESTIC SALES, DRY BASIS <sup>1/</sup></b>	<b>2,606,577</b>	<b>2,455,744</b>	<b>2,776,936</b>	<b>3,164,806</b>	<b>11,004,063</b>

Source: Corn refiners' reports to Price Waterhouse; distributed through Grain Branch, PMA.

<sup>1/</sup> Based on 43° sirup with average solids content of 80.3 percent. Computed, Sugar Branch, PMA.



Table 14

SUGAR DELIVERIES BY TYPE OF PRODUCT OR BUSINESS OF BUYER AND BY TYPE OF SUGAR DELIVERED,  
UNITED STATES

	Calendar year, 1949 <sup>1/</sup>				
	Crystalline				
Product or Business of Buyer	Beet (100 lb. bags)	Cane <sup>3/</sup> (100 lb. bags)	Imported D.C. (100 lb. bags)	Liquid <sup>4/</sup> (100 lb. equiv.)	Total
Bakery and allied products, cereals and cereal products	3,652,179	7,087,954	1,053,646	322,674	12,116,453
Confectionery and related products	2,702,902	6,692,590	1,891,670	1,303,963	12,791,125
Ice cream and dairy products	1,176,978	2,056,435	308,393	904,013	4,445,819
Beverages	1,902,048	7,975,336	1,970,069	2,417,188	14,264,641
Canned, bottled, frozen foods, jams, jellies, preserves, etc.	3,079,756	3,146,458	1,179,768	1,451,098	8,857,080
Multiple and all other food uses	806,210	2,305,160	76,041	827,752	4,015,163
Non-food products	43,873	294,112	368,302	31,136	737,423
Hotels, restaurants, institutions	77,682	442,384	25,168	1,424	546,658
Wholesale grocers, jobbers, sugar dealers	10,471,299	40,923,741	2,290,171	119,477	53,804,688
Retail grocers, chain stores, super markets	2,533,479	21,008,101	165,225	3,213	23,710,018
All other deliveries, includ- ing deliveries to Government agencies	594,916	813,868	227,056	2,713	1,638,553
TOTAL DELIVERIES	27,041,322	92,946,139	9,555,509	7,384,651	136,927,621
Deliveries in consumer-size packages (less than 100 lb. <sup>2/</sup> )	7,532,677	46,356,760	266,062		53,955,499

Table 15

FIRST QUARTER, 1949 <sup>5/</sup>

Bakery and allied products, cereals and cereal products	869,384	1,758,762	212,856	88,015	2,929,017
Confectionery and related products	580,644	1,685,103	284,689	342,427	2,892,863
Ice cream and dairy products	280,257	408,034	42,227	153,160	883,678
Beverages	484,211	1,715,842	271,178	429,739	2,900,970
Canned, bottled, frozen foods, jams, jellies, preserves, etc.	446,822	647,712	203,255	121,974	1,419,763
Multiple and all other food uses	211,388	539,813	32,960	164,172	948,333
Non-food products	7,917	72,834	117,007	6,390	204,148
Hotels, restaurants, institutions	24,874	109,549	5,655	308	140,386
Wholesale grocers, jobbers, sugar dealers	2,176,400	9,216,054	554,952	17,410	11,964,816
Retail grocers, chain stores, super markets	479,143	4,553,982	42,283	-	5,075,408
All other deliveries, includ- ing deliveries to Government agencies	229,886	290,166	87,488	690	608,230
TOTAL DELIVERIES	5,790,926	20,997,851	1,854,550	1,324,285	29,967,612
Deliveries in consumer-size <sup>2/</sup> packages (less than 100 lb.)	1,388,429	10,447,283	54,372	-	11,890,034

Source: Reports of primary distributors of sugar to Sugar Branch, P.M.A.

<sup>1/</sup> Represent 97% of deliveries by primary distributors in continental United States.<sup>2/</sup> "Deliveries in consumer-size packages" are included in "Total Deliveries."<sup>3/</sup> Includes raw sugar delivered by refiners for direct consumption.<sup>4/</sup> Includes continental production and imports.<sup>5/</sup> Represent 96% of deliveries by primary distributors in continental United States.

Table 16

SUGAR DELIVERIES BY TYPE OF PRODUCT OR BUSINESS OF BUYER AND BY TYPE OF SUGAR DELIVERED,  
UNITED STATES

Product or Business of buyer	SECOND QUARTER, 1949 1/				
	Beet (100-lb. bags)	Crystalline Cane 3/ (100-lb. bags)	Imported D. C. (100-lb. bags)	Liquid 4/ (100-lb. equiv.)	Total (100 lb.)
Bakery and allied products, cereal and cereal products	814,922	1,790,704	401,719	86,292	3,093,637
Confectionery and related products	470,260	1,478,975	630,081	284,791	2,864,107
Ice cream and dairy products	327,911	746,759	112,502	307,143	1,464,315
Beverages	362,722	2,329,956	851,266	748,763	4,292,707
Canned, bottled, frozen foods, jams, jellies, preserves, etc.	633,370	615,538	346,030	200,380	1,795,318
Multiple and all other food uses	192,887	578,748	14,832	212,541	999,008
Non-food products	7,918	63,320	72,809	6,731	150,778
Hotels, restaurants, institutions	22,375	106,183	9,981	882	139,421
Wholesale grocers, jobbers, sugar dealers	1,961,893	10,766,109	737,003	31,365	13,496,370
Retail grocers, chain stores, super markets	535,562	5,566,370	38,839	25	6,140,796
All other deliveries, including deliveries to Government agencies	95,646	188,583	124,046	529	408,804
<b>TOTAL DELIVERIES</b>	<b>5,425,466</b>	<b>24,201,245</b>	<b>3,339,108</b>	<b>1,879,442</b>	<b>34,845,261</b>
Deliveries in consumer-size packages (less than 100 lbs.) 2/	1,613,249	12,098,358	60,309	-	13,771,916

Table 17

## THIRD QUARTER, 1949 1/

Bakery and allied products, cereal and cereal products	1,070,107	1,905,473	339,451	76,812	3,391,843
Confectionery and related products	865,382	1,685,900	460,456	325,759	3,337,497
Ice cream and dairy products	367,480	620,733	121,420	306,551	1,416,184
Beverages	605,701	2,278,853	725,679	800,170	4,410,403
Canned, bottled, frozen foods, jams, jellies, preserves, etc.	1,539,750	1,187,588	396,920	862,377	3,986,635
Multiple and all other food uses	233,333	693,661	21,904	258,520	1,207,418
Non-food products	6,180	82,979	122,335	9,214	221,408
Hotels, restaurants, institutions	10,971	104,962	8,117	126	124,176
Wholesale grocers, jobbers, sugar dealers	3,917,367	13,170,907	684,881	39,139	17,812,294
Retail grocers, chain stores, super markets	879,239	6,580,415	59,768	4	7,519,426
All other deliveries, including deliveries to Government agencies	123,892	185,776	13,951	794	324,413
<b>TOTAL DELIVERIES</b>	<b>9,619,402</b>	<b>28,497,247</b>	<b>2,954,882</b>	<b>2,680,166</b>	<b>43,751,697</b>
Deliveries in consumer-size packages (less than 100 lbs.) 2/	2,653,159	14,918,540	99,989	-	17,671,688

Table 18

## FOURTH QUARTER, 1949 1/

Bakery and allied products, cereal and cereal products	897,766	1,633,015	99,620	71,555	2,701,956
Confectionery and related products	786,616	2,042,612	516,444	350,986	3,696,658
Ice cream and dairy products	201,330	310,909	32,244	137,159	681,642
Beverages	449,414	1,650,685	121,946	438,516	2,660,561
Canned, bottled, frozen foods, jams, jellies, preserves, etc.	459,814	695,620	233,563	266,367	1,655,364
Multiple and all other food uses	168,602	492,938	6,345	192,519	860,404
Non-food products	21,858	74,979	56,151	8,101	161,089
Hotels, restaurants, institutions	19,462	121,690	1,415	108	142,675
Wholesale grocers, jobbers, sugar dealers	2,415,639	7,770,671	313,335	31,563	10,531,208
Retail grocers, chain stores, super markets	639,535	4,307,334	24,335	3,134	4,974,388
All other deliveries, including deliveries to Government agencies	145,492	149,343	1,571	70	297,106
<b>TOTAL DELIVERIES</b>	<b>6,205,528</b>	<b>19,249,796</b>	<b>1,406,969</b>	<b>1,500,753</b>	<b>28,363,051</b>
Deliveries in consumer-size packages (less than 100 lbs.) 2/	1,677,840	8,892,579	51,392	-	10,621,811

Source: Reports of primary distributors of sugar to the Sugar Branch, P.M.A.

1/ Represent 97 percent of deliveries by primary distributors in continental United States.

2/ "Deliveries in consumer-size packages" are included in "Total Deliveries."

3/ Includes raw sugar delivered by refiners for direct consumption.

4/ Includes continental production and imports.



Table 19

DEXTROSE: TOTAL SALES, BY TYPE OF BUYER, YEAR ENDING DECEMBER 31, 1949  
(100 lb. bags)

New England

<u>Product or Business of Buyer</u>	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>	<u>Total Year 1949</u>
Bakery and allied products; cereals and cereal products	38,659	28,506	40,575	40,937	148,677
Confectionery and related products	1,187	676	1,694	503	4,060
Ice cream and dairy products	2,459	3,977	3,000	851	10,287
Beverages	5,740	5,950	10,645	5,524	27,859
Canned, bottled, frozen foods; jams, jellies, preserves, etc.	1,195	1,073	1,120	1,128	4,516
Multiple and all other products	1,356	1,597	2,079	2,643	7,675
Non-food products	748	324	1,988	3,228	6,288
Wholesale grocers; jobbers, retail grocers, chain stores; super markets	1,146	863	1,268	1,161	4,438
Other sales including sales to Government agencies	620	1,091	822	794	3,327
<u>TOTAL DOMESTIC SALES</u> <sup>1/</sup>	53,110	44,057	63,191	56,769	217,127

Source: Reports of dextrose manufacturers to Sugar Branch, P.M.A.

<sup>1/</sup> Excludes packaged dextrose; represents sales to continental United States and manufacturer's intra-company usage of dextrose.

Table 20

SUGAR DELIVERIES BY TYPE OF PRODUCT OR BUSINESS OF BUYER  
Calendar year, 1949

NEW ENGLAND

<u>Product or Business of Buyer</u>	<u>First Quarter (100 lb.)</u>	<u>Second Quarter (100 lb.)</u>	<u>Third Quarter (100 lb.)</u>	<u>Fourth Quarter (100 lb.)</u>	<u>Total (100 lb.)</u>
Bakery and allied products, cereal and cereal products	135,738	165,443	162,532	127,823	591,536
Confectionery and related products	329,226	276,703	308,948	395,162	1,310,039
Ice cream and dairy products	49,802	109,230	102,112	49,553	310,697
Beverages	93,118	172,575	186,676	81,388	533,757
Canned, bottled, frozen foods, jams, jellies, preserves, etc.	89,075	83,695	112,663	129,546	414,979
Multiple and all other food uses	23,243	32,317	30,349	27,864	113,773
Non-food uses	4,572	11,697	8,537	3,902	28,708
Hotels, restaurants, institutions	16,004	15,311	14,684	15,014	61,013
Wholesale grocers, jobbers, sugar dealers	676,125	762,815	874,347	646,746	2,960,033
Retail grocers, chain stores, super markets	403,937	427,019	485,579	429,792	1,746,327
All other deliveries, including deliveries to Government agencies	12,702	7,435	10,427	6,483	37,047
<u>TOTAL DELIVERIES</u>	1,833,542	2,064,240	2,296,854	1,913,273	8,107,909
Deliveries in consumer-size packages (less than 100 lbs.) <sup>1/</sup>	769,330	778,683	959,688	777,675	3,285,376

Source: Reports of primary distributors of sugar to the Sugar Branch, P.M.A.

<sup>1/</sup> "Deliveries in consumer-size packages" are included in "Total Deliveries."



Table 21

DEXTROSE: TOTAL SALES, BY TYPE OF BUYER, YEAR ENDING DECEMBER 31, 1949  
(100-lb. bags)

Middle Atlantic

<u>Product or Business of Buyer</u>	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>	<u>Total Year 1949</u>
Bakery and allied products, cereals and cereal products	168,355	132,237	164,415	153,116	618,123
Confectionery and related products	36,851	36,596	36,552	34,906	144,905
Ice cream and dairy products	7,775	15,550	18,024	5,226	46,575
Beverages	26,717	36,611	38,009	33,642	134,979
Canned, bottled, frozen foods; jams, jellies, preserves, etc.	15,075	14,661	14,579	12,883	57,198
Multiple and all other products	24,764	28,275	28,097	35,547	116,683
Non-food products	22,373	21,861	25,739	30,250	100,223
Wholesale grocers; jobbers; retail grocers; chain stores; super markets	6,272	3,208	6,996	6,172	22,648
Other sales including sales to Government agencies	6,673	7,507	2,784	2,825	19,789
TOTAL DOMESTIC SALES 1/	314,855	296,506	335,195	314,567	1,261,123

Source: Reports of dextrose manufacturers to Sugar Branch, P.M.A.

1/ Excludes packaged dextrose; represents sales in continental United States and manufacturer's intra-company usage of dextrose.

Table 22

SUGAR DELIVERIES BY TYPE OF PRODUCT OR BUSINESS OF BUYER, CALENDAR YEAR 1949

MIDDLE ATLANTIC

<u>Product or Business of Buyer</u>	<u>First Quarter (100 lb.)</u>	<u>Second Quarter (100 lb.)</u>	<u>Third Quarter (100 lb.)</u>	<u>Fourth Quarter (100 lb.)</u>	<u>Total (100 lb.)</u>
Bakery and allied products, cereals and cereal products	1,042,645	1,140,235	1,129,642	936,411	4,248,933
Confectionery and related products	1,343,967	1,388,050	1,440,798	1,666,899	5,839,714
Ice cream and dairy products	268,937	503,043	473,879	221,630	1,467,489
Beverages	774,100	1,114,047	1,117,670	690,125	3,695,942
Canned, bottled, frozen foods, jams, jellies, preserves, etc.	319,256	477,810	782,712	451,501	2,031,279
Multiple and all other food uses	497,773	536,016	710,085	548,310	2,292,184
Non-food uses	53,279	35,690	48,050	52,599	189,618
Hotels, restaurants, institutions	78,103	79,489	74,996	87,386	319,974
Wholesale grocers, jobbers, sugar dealers	2,020,777	2,249,445	2,521,030	1,872,890	8,664,142
Retail grocers, chain stores, super markets	1,131,742	1,299,137	1,481,699	1,183,978	5,096,556
All other deliveries, including deliveries to Government agencies	119,133	88,743	78,561	47,768	334,205
TOTAL DELIVERIES	7,649,712	8,911,705	9,859,122	7,759,497	34,180,036
Deliveries in consumer-size packages (less than 100 lbs.) 1/	2,199,872	2,516,403	3,027,490	2,316,680	10,060,445

Source: Reports of primary distributors of sugar to the Sugar Branch, P.M.A.

1/ "Deliveries in consumer-size packages" are included in "Total Deliveries."

Table 23

DEXTROSE: TOTAL SALES, BY TYPE OF BUYER, YEAR ENDING DECEMBER 31, 1949  
(100 lb. bags)

North Central

<u>Product or Business of Buyer</u>	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>	<u>Total Year 1949</u>
Bakery and allied products; cereals and cereal products	388,497	320,848	422,651	392,715	1,524,711
Confectionery and related products	21,053	25,433	28,726	20,851	96,063
Ice cream and dairy products	23,885	27,691	31,393	11,845	94,814
Beverages	73,578	92,895	106,646	55,626	328,745
Canned, bottled, frozen foods; jams, jellies, preserves, etc.	9,572	15,312	33,979	23,596	82,459
Multiple and all other products	34,068	28,099	35,499	35,354	133,020
Non-food products	23,033	23,629	23,821	22,890	93,373
Wholesale grocers; jobbers; retail grocers; chain stores; super markets	17,582	16,385	26,063	17,783	77,813
Other sales including sales to Government agencies	6,654	6,557	11,625	11,088	35,924
TOTAL DOMESTIC SALES <sup>1/</sup>	597,922	556,849	720,403	591,748	2,466,922

Source: Reports of dextrose manufacturers to Sugar Branch, P.M.A.

<sup>1/</sup> Excludes packaged dextrose; represents sales in continental United States and manufacturer's intra-company usage of dextrose.

Table 24

SUGAR DELIVERIES BY TYPE OF PRODUCT OR BUSINESS OF BUYER  
Calendar year, 1949

North Central

<u>Product or Business of Buyer</u>	<u>First Quarter (100 lb.)</u>	<u>Second Quarter (100 lb.)</u>	<u>Third Quarter (100 lb.)</u>	<u>Fourth Quarter (100 lb.)</u>	<u>Total (100 lb.)</u>
Bakery and allied products, cereal and cereal products	929,470	875,347	1,059,996	754,104	3,518,917
Confectionery and related products	805,765	831,541	1,101,072	1,191,684	3,930,062
Ice cream and dairy products	299,510	454,568	397,450	204,027	1,354,555
Beverages	757,292	730,128	926,026	590,095	3,003,541
Canned, bottled, frozen foods, jams, jellies, preserves, etc.	248,005	393,786	601,367	353,041	1,596,199
Multiple and all other food uses	285,759	245,414	278,935	156,017	966,125
Non-food uses	28,959	23,726	20,994	35,138	108,817
Hotels, restaurants, institutions	15,667	16,405	12,611	14,353	59,036
Wholesale grocers, jobbers, sugar dealers	3,860,713	4,251,758	6,324,249	3,459,796	17,896,516
Retail grocers, chain stores, super markets	1,402,733	1,784,012	2,294,433	1,351,093	6,832,271
All other deliveries, including deliveries to Government agencies	56,211	45,357	51,948	58,544	212,060
TOTAL DELIVERIES	8,589,084	9,652,042	13,069,081	8,167,892	39,478,099
Deliveries in consumer-size <sup>1/</sup> packages (less than 100 lbs.)	3,404,498	3,957,790	5,558,572	2,955,512	15,876,372

Source: Reports of primary distributors of sugar to the Sugar Branch, P.M.A.

<sup>1/</sup> "Deliveries in consumer-size packages" are included in "Total Deliveries."

Table 25

DEXTROSE: TOTAL SALES, BY TYPE OF BUYER, YEAR ENDING DECEMBER 31, 1949  
(100-lb. bags)

SOUTH

<u>Product or Business of Buyer</u>	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>	<u>Total Year 1949</u>
Bakery and allied products, cereals and cereal products	226,467	180,924	223,515	187,072	817,978
Confectionery and related products	2,977	3,470	6,081	3,413	15,941
Ice cream and dairy products	14,942	20,587	24,147	10,397	70,073
Beverages	41,343	43,456	52,406	27,369	164,574
Canned, bottled, frozen foods; jams, jellies, preserves, etc.	62,326	20,934	21,004	65,841	170,105
Multiple and all other products	7,620	4,835	10,307	10,140	32,902
Non-food products	33,558	15,745	25,390	29,120	103,813
Wholesale grocers; jobbers; retail grocers; chain stores; super markets	13,049	12,850	18,015	10,196	54,110
Other sales including sales to Government agencies	4,377	6,302	14,790	4,545	30,014
TOTAL DOMESTIC SALES 1/	406,659	309,103	395,655	348,093	1,459,510

Source: Reports of dextrose manufacturers to Sugar Branch, P.M.A.

1/ Excludes packaged dextrose; represents sales in continental United States and manufacturer's intra-company usage of dextrose.

Table 26

SUGAR DELIVERIES BY TYPE OF PRODUCT OR BUSINESS OF BUYER, CALENDAR YEAR 1949

SOUTH

<u>Product or Business of Buyer</u>	<u>First Quarter (100 lb.)</u>	<u>Second Quarter (100 lb.)</u>	<u>Third Quarter (100 lb.)</u>	<u>Fourth Quarter (100 lb.)</u>	<u>Total (100 lb.)</u>
Bakery and allied products, cereals and cereal products	528,308	569,110	575,340	509,314	2,182,072
Confectionery and related products	209,115	195,436	295,515	217,550	917,616
Ice cream and dairy products	146,787	246,700	269,324	102,544	765,455
Beverages	1,073,082	1,868,191	1,770,668	1,071,860	5,783,801
Canned, bottled, frozen foods, jams, jellies, preserves, etc.	285,375	307,211	376,178	356,620	1,325,384
Multiple and all other food uses	68,012	93,372	81,793	53,574	296,751
Non-food uses	116,421	78,505	143,683	66,104	404,713
Hotels, restaurants, institutions	14,083	12,898	13,165	13,341	53,487
Wholesale grocers, jobbers, sugar dealers	3,835,063	4,665,786	5,626,489	3,268,953	17,396,291
Retail grocers, chain stores super markets	1,518,098	1,960,723	2,279,527	1,484,296	7,242,644
All other deliveries, including deliveries to Government agencies	206,137	177,438	60,087	74,445	518,111
TOTAL DELIVERIES	8,000,615	10,175,370	11,491,769	7,218,601	36,886,355
Deliveries in consumer-size 1/ packages (less than 100 lbs.)	3,901,688	4,806,165	5,596,590	3,251,513	17,555,956

Source: Reports of primary distributors of sugar to the Sugar Branch, P.M.A.

1/ "Deliveries in consumer-size packages" are included in "Total Deliveries."



Table 27

DEXTROSE: TOTAL SALES, BY TYPE OF BUYER, YEAR ENDING DECEMBER 31, 1949  
(100 lb. bags)

West

<u>Product or Business of Buyer</u>	<u>First Quarter</u>	<u>Second Quarter</u>	<u>Third Quarter</u>	<u>Fourth Quarter</u>	<u>Total Year 1949</u>
Bakery and allied products; cereals and cereal products	101,105	77,354	100,886	89,848	369,193
Confectionery and related products	5,203	2,246	4,365	4,490	16,304
Ice cream and dairy products	10,776	12,851	17,569	7,742	48,938
Beverages	17,882	15,006	28,775	16,980	78,643
Canned, bottled, frozen foods; jams, jellies, preserves, etc.	5,398	26,825	392,916	44,824	469,963
Multiple and all other products	3,723	2,192	6,893	2,900	15,708
Non-food products	1,067	692	979	1,104	3,842
Wholesale grocers; jobbers; retail grocers; chain stores; super markets	13,666	10,496	14,470	10,396	49,018
Other sales including sales to Government agencies	1,275	1,107	1,903	2,075	6,360
<b>TOTAL DOMESTIC SALES 1/</b>	<b>160,095</b>	<b>148,769</b>	<b>568,756</b>	<b>180,349</b>	<b>1,057,969</b>

Source: Reports of dextrose manufacturers to Sugar Branch, P.M.A.

1/ Excludes packaged dextrose; represents sales in continental United States and manufacturer's intra-company usage of dextrose.

Table 28

SUGAR DELIVERIES BY TYPE OF PRODUCT OR BUSINESS OF BUYER  
Calendar year, 1949

West

<u>Product or Business of Buyer</u>	<u>First Quarter (100 lb.)</u>	<u>Second Quarter (100 lb.)</u>	<u>Third Quarter (100 lb.)</u>	<u>Fourth Quarter (100 lb.)</u>	<u>Total (100 lb.)</u>
Bakery and allied products, cereals and cereal products	392,855	343,502	464,333	374,304	1,574,994
Confectionery and related products	204,790	172,377	191,164	225,363	793,694
Ice cream and dairy products	119,542	150,774	173,419	103,888	547,623
Beverages	203,378	407,766	409,366	227,093	1,247,603
Canned, bottled, frozen foods, jams, jellies, preserves, etc.	478,052	532,816	2,113,715	364,656	3,489,239
Multiple and all other food uses	73,546	91,889	106,256	74,639	346,330
Non-food uses	917	1,160	144	3,346	5,567
Hotels, restaurants, institutions	16,529	15,318	8,720	12,581	53,148
Wholesale grocers, jobbers, sugar dealers	1,572,136	1,566,566	2,466,179	1,282,823	6,887,704
Retail grocers, chain stores, super markets	618,897	669,905	978,188	525,229	2,792,219
All other deliveries, including deliveries to Government agencies	214,015	89,831	123,390	109,866	537,102
<b>TOTAL DELIVERIES</b>	<b>3,894,657</b>	<b>4,041,904</b>	<b>7,034,871</b>	<b>3,303,788</b>	<b>18,275,220</b>
Deliveries in consumer-size packages (less than 100 lbs.) 1/	1,614,695	1,712,875	2,529,348	1,320,431	7,177,349

Source: Reports of primary distributors of sugar to the Sugar Branch, P.M.A.

1/ "Deliveries in consumer-size packages" are included in "Total Deliveries."

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